

# COMMERCIAL FERTILIZER

CONSOLIDATED  
WITH THE  
FERTILIZER  
GREEN  
BOOK

## "JUNE GRAZING IN JANUARY"<sup>®</sup> means *more* fall tonnage!



The "JUNE GRAZING IN JANUARY" program, inaugurated by Barrett in the South in 1945, is rapidly gaining new importance today. This program helps both the farmer and the fertilizer industry.

To the farmer, it means abundant fall and winter grazing at a time when good green feed is needed most.

To the fertilizer industry, it offers an excellent opportunity to increase fall sales of fertilizer in the South.

Now is the time to urge farmers to get "JUNE GRAZING IN JANUARY!"

### THE BARRETT DIVISION ALLIED CHEMICAL & DYE CORPORATION

NEW YORK 6, N. Y. • RICHMOND 19, VA. • HOPEWELL, VA. • ATLANTA 3, GA.  
COLUMBIA 1, S. C. • SOUTH POINT, OHIO • SAN FRANCISCO 3, CALIF.

### How to Get JUNE GRAZING IN JANUARY

- 1 Seed heavily and early with small grains or grain-legume mixtures recommended by County Agent.
- 2 At planting, use a generous application of complete fertilizer with a high-nitrogen content.
- 3 When plants are up to a stand, use a liberal top-dressing of Arcadian<sup>®</sup>, the American Nitrate of Soda, or A-N-L<sup>®</sup> Nitrogen Fertilizer.



\*Reg. U. S. Pat. Off.

# LONG

## ON VALUE

*that's*  
**FULTON QUALITY  
COTTON BAGS**

It's the bag with the "plus" value that most consumers want. After the hard trip from your plant to the dealer, thence to the farm, your bag of fertilizer arrives in first class condition—unbroken—easy to handle and store. When the fertilizer is emptied the farm wife collects her premium—many yards of first quality sheeting or osnaburg that are easily made into clothing, towels, draperies, slip covers, etc.

Fulton Quality Cotton Bags are available from our Southern plants.



**Fulton** BAG & COTTON MILLS Atlanta • New Orleans • Dallas • Kansas City, Kans. • Minneapolis  
St. Louis • Denver • Los Angeles • New York City, 347 Madison Ave.

# SMIROW

## TANKAGE

*Makes Plants  
GROW!*



Farmers are looking for ways to cut the cost of producing crops. Acreage allotments necessitate larger yields. To meet these requirements, farmers demand quality fertilizers to make plants grow. Correct proportions of SMIROW TANKAGE as a nitrogen source assure QUALITY because SMIROW TANKAGE is 100% natural organic . . . 90% water insoluble and 90% available. It is always in perfect mechanical condition and uniform in texture and color.

To help make your sales grow,  
write for samples and prices.

### SMITH-ROWLAND COMPANY

NORFOLK, VIRGINIA • CHEMICAL, ILLINOIS



For the complete line  
of spreader bodies, look  
to Baughman, because

**Baughman**  
**BUILDS 'EM ALL !**



ASK-3-B



ASK-3W-6



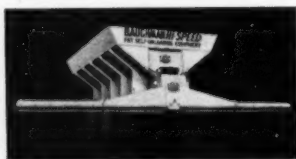
ASK-MS-4

- 13 basic agricultural models . . . one or more is engineered and built to fit your specific needs.
- Lengths from 9 to 33 ft. (5 to 30 tons capacity) . . . 1 to 6 compartments for selective unloading.
- Available with single or double distributor.
- Available in 4 different gear reductions and flight spacing as desired to control volume from a few hundred lbs. per acre to 3 or more tons per acre.
- Complete selection of bottom widths, top widths and degrees of side slope.
- Built of high tensile alloy steel to assure maximum payload.
- Baughman's NEW Oil Sealed Clutch and 3 Speed Transmission regulate rate of discharge from body. Velocity of spinner remains in constant ratio to engine speed due to new direct type drive — permits wide, even spread at all times.

Write for full information and our recommendations. More than 25,000 Baughman Self-Unloading Bodies from coast to coast.

**Model O-2 Spreader Attachment** — Gives uniform spread on the level, slopes or hillsides. Folds securely for highway travel. Ideal for rock phosphate, dry powdered lime and many other materials.

**Model 235 Fertilizer Sprayer**. Holds the material to the ground and makes it stick. Covers as high as 4 acres to the mile at 15 miles per hour. High tensile alloy steel construction. Rubber and canvas curtains prevent blowing.



Usually Delivered from Stock



**BAUGHMAN MANUFACTURING CO., Inc.**

971 SHIPMAN ROAD

JERSEYVILLE, ILLINOIS

**"The Pioneers of the Fertilizer Spreading Industry"**

COMMERCIAL FERTILIZER





**MICA**  
makes the  
**DIFFERENCE**

*Get*



# Plasteel

ROOFING and SIDING

*Protection **NOW!***

1. **STEEL BASE—**  
for strength and durability
2. **RUST INHIBITOR COAT—**  
protects steel and anchors  
plastics firmly to steel
3. **ASPHALT-PLASTICS COAT—**  
seals out weather and cor-  
rosive influences
4. **MICA FINISH COAT—**  
makes the difference! Adds  
beauty, insulation and per-  
manence.

When you need roofing and siding, you usually need them in a hurry. While Plasteel is geared for speedy service, right now with the hard pull obviously ahead, it's wise to anticipate. Let Plasteel estimate your needs. Remember, with Plasteel—and only Plasteel—you also get *mica protection*! And there's the big difference! Mica is immune to deterioration. Mica adds lifetime protection to your buildings.

Let us **QUOTE** you  
from **STOCK**

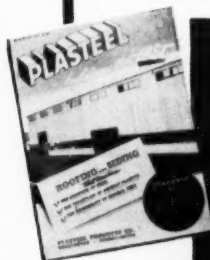
Plasteel also gives you *speedy erection*. It's easy to handle, and requires no skill. Economical too, needs no paint, no repairs.



**PLASTEEL**

PRODUCTS CO.  
Washington, Pa.

Mail Coupon Today



**PLASTEEL PRODUCTS CO., Washington, Pa.**

- ☐ Engineer's Handbook    ☐ Sample of Plasteel  
☐ Send Estimate. Specifications attached.

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Attention of \_\_\_\_\_ Title \_\_\_\_\_

Street Address \_\_\_\_\_ Box No. \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

# COMMERCIAL FERTILIZER

ESTABLISHED 1910

July, 1951

Vol. 83. No. 1

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Published Monthly by

WALTER W. BROWN PUBLISHING CO., INC.

75 Third St. N. W., Atlanta, Georgia

Phone Atwood 4160

ERNEST H. ABERNETHY, President

BRUCE MORAN, Editor V. T. CRENSHAW, Business Manager

Subscription rates: United States, \$3.00 per year. Foreign \$5.00 per year.

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COMMERCIAL FERTILIZER, entered as second class matter, October 12, 1910, at the post office at Atlanta, under the Act of March 3, 1879. Published monthly except semi-monthly in September, by Walter W. Brown Publishing Co., Inc., 75 Third St., N. W., Atlanta Georgia.

# If You Need Nitrogen, Get it From Phillips!



## AMMONIUM SULFATE

Phillips 66 Ammonium Sulfate is a free-flowing 21% nitrogen material! Mixes easily! Uniform crystals resist caking! Ideal for high analysis mixed goods! A fine direct application material, too!

## AMMONIUM NITRATE

Phillips 66 Prilled Ammonium Nitrate contains 33% nitrogen. The small, coated prills or pellets resist caking . . . handle easily. Depend on Phillips 66 Prilled Ammonium Nitrate for uniform, free-flowing properties and top-notch crop response.

## NITROGEN SOLUTIONS

Get more N per dollar! Phillips 66 Nitrogen Solutions are well suited to the preparation of high-analysis fertilizers and the ammoniation of superphosphate. These three nitrogen solutions keep handling costs low! Promote rapid, thorough curing!

## ANHYDROUS AMMONIA

Tank car shipments of Anhydrous Ammonia (82% nitrogen) are assured to Phillips contract customers by Phillips huge production facilities in the Texas Panhandle. Write our nearest district office for full information.

---

## PHILLIPS CHEMICAL COMPANY

A Subsidiary of Phillips Petroleum Company

FERTILIZER SALES DIVISION • BARTLESVILLE, OKLAHOMA

DISTRICT SALES OFFICES:

NORFOLK—610 Royster Bldg. • TAMPA—7 Terrace Office Bldg., 404 Marion St. • HOUSTON—604 City National Bank Bldg. • OMAHA—WOW Bldg.  
AMARILLO—First National Bank Bldg. • LOS ANGELES—4521 Produce Plaza West • BARTLESVILLE—Adams Building

# Keeps Production Steady

Big fertilizer company  
prefers dust-proof, fume-proof, simple construction of

## WORTHINGTON *Ransome* MIXER

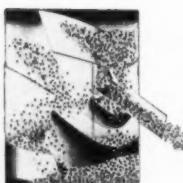
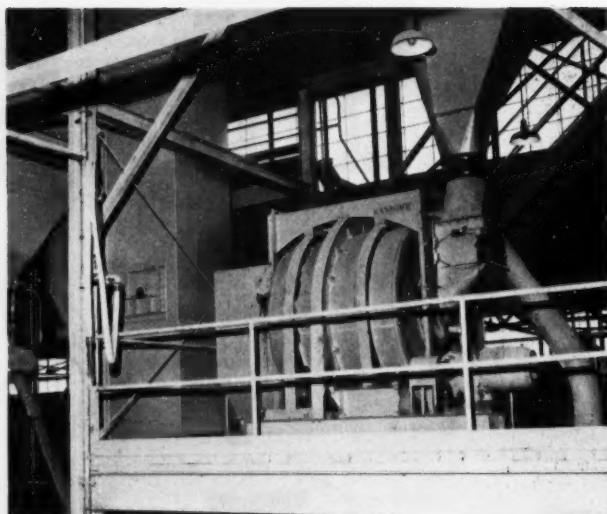
Dust can't interfere with efficiency and profits with this big fertilizer mixer on the job.

Construction is dust-proof, fume-proof.

Other features: air-operated control for charging and discharging (valve operated by hand or by solenoid and remote push-button) . . . automatic vibrating hammers to prevent "building up" inside drum . . . large clean-out manholes.

Standard sizes— $\frac{1}{2}$ , 1, 2 tons. Pulley or direct electric motor drive with fully-enclosed, fan-cooled motor.

Write for bulletin on Worthington-Ransome Mixers, built from designs developed from nearly a century of mixer experience. And remember other Worthington products for the fertilizer industry—acid pumps, air compressors, air spades, etc. *Worthington Pump and Machinery Corporation, Ransome Industrial Mixer Division, Dunellen, New Jersey.*



### THIS IS THE FAMOUS RANSOME MIXING ACTION

1. As charge enters, it is scattered over the bottom. (Drum revolves toward you in picture.)
2. Mixture then goes up sides, falls in two fanlike formations, is carried up again—operation repeated.
3. When mixed, material is discharged, leaving drum completely clean of all, including finest, material.

# WORTHINGTON



YR.1.3

COMMERCIAL FERTILIZER

**Top-dressing 300 pounds  
of 8-16-16 meant  
more wheat, better legumes  
for Jack Carpenter**

**MT. STERLING, OHIO**

At Mt. Sterling, Ohio, Jack Carpenter's wheat crop was top-dressed in the spring with 300 pounds per acre of 8-16-16. Mr. Carpenter reports: "The increase in yield of  $11\frac{1}{2}$  bushels of wheat per acre more than paid for the fertilizer, but the most important value was the better legume stand where the 300 pounds of 8-16-16 were applied."



## **Bigger yields for farmers ... better business for you**

● Wheat, corn, pastures, orchards . . . all respond profitably to application of high-analysis complete fertilizers.

As farmers learn about the increased yields and increased profits, you'll find growing demand for fertilizers with high nitrogen content. Be sure your line includes these materials . . . and be sure U-S-S Ammonium Sulphate supplies a major share of the

nitrogen in your high-analysis complete fertilizers.

U-S-S Ammonium Sulphate is dry and free-running . . . it stands up well in storage . . . doesn't corrode drills or other distributing equipment. Supplies of U-S-S Ammonium Sulphate are shorter this year, so plan your requirements well in advance. United States Steel Company, 525 William Penn Place, Pittsburgh 30, Pennsylvania.



# **U-S-S AMMONIUM SULPHATE**

**UNITED STATES STEEL**





## JUST AROUND THE CORNER

By Vernon Mount



"WILL YOU HAVE ME IN SEPTEMBER...as you did in May" is a question the boys with the bloated inventories should be asking their well-filled shelves. Because it is a real problem.

GOODS WILL BE SCARCER LATER. It seems impossible just now, with warehouses loaded at the retail level, and factories stacked high with assembled units and high component stocks. But it will happen, barring a complete turn-around by the Russians, an amicable settlement of the Iranian question - and cancellation by our own Government of its war materiel plans.

BUY NOW WHILE BARGAINS REIGN--and they are plentiful in many fields. For prices are being cut only because pressure is being exerted by the banks, and goods must be turned into cash to pay off loans. Merchants know what to expect. They would rather hold the goods for the shortages sure to come.

IT APPLIES TO EQUIPMENT, TOO. Your plant should be checked over carefully for equipment likely to wear out in the next few years - or for places where a machine will replace manpower. For that, too, is likely to be scarce in the not too distant future.

MAYBE MY NECK IS WAY OUT - but that's the way I see what lies just around the corner. We'll see.

Yours faithfully,

*Vernon Mount*





## *Friendship starts with a little extra service*

A little extra service or effort makes a lot of difference. Here at Raymond, all along the production line, each craftsman gives his job a little extra care, to make sure that the Raymond Shipping Sack you use will give your product better protection, sales appeal, and handling ease.

These quality Shipping Sacks are CUSTOM BUILT in various types, sizes, and strengths . . . printed in multi-color or plain.

If you make a quality fertilizer, pack it in a quality Raymond Multi-Wall Paper Shipping Sack.

**THE RAYMOND BAG COMPANY**  
MIDDLETOWN, OHIO

# RAYMOND

**MULTI-WALL PAPER SHIPPING SACKS**





## Trona Muriate of Potash

This vitally important ingredient of mixed fertilizer provides the soil nutrient necessary to resist plant diseases and to enhance the productivity of crops. To obtain the best results, specify "Trona" Muriate of Potash . . . made by the pioneer producers in America.

## Three Elephant Agricultural Pentahydrate Borax

Contains a minimum of 44%  $B_2O_3$  or approximately 121% equivalent Borax. More economical in this concentrated form when used as an addition to fertilizer or for direct application to the soil, to correct a deficiency of Boron. Consult your local County Agent or State Experimental Station.



## AMERICAN POTASH & CHEMICAL CORPORATION

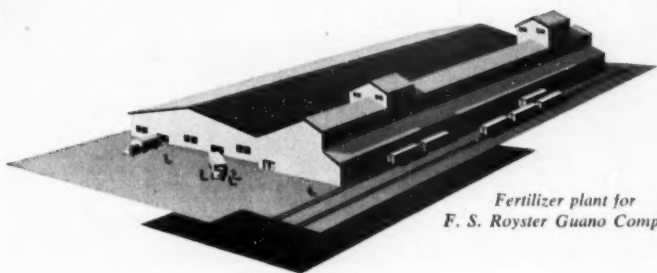
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CHICAGO 4, ILLINOIS

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ATLANTA 3, GEORGIA

3030 WEST SIXTH STREET  
LOS ANGELES 54, CALIF.



*Fertilizer plant for  
F. S. Royster Guano Company*

## **You Get Modern Flexible Design At Low Cost With McCloskey Buildings**

**Your operations** may call for a building of eccentric design or a simple structure—both can be built to suit your requirements with economy by McCloskey. All stresses and loads are carefully calculated to give you a substantial permanent building, tailor-made for you in any width—any length.

**Complete construction service** is furnished by McCloskey. Our engineers give you the benefit of their long experience in building industrial plants. They supervise construction from start to finish. Your staff can continue its regular duties without devoting productive time to your building project.

**You will be pleased** like many of the largest companies around the world with your McCloskey Buildings. They have found that the complete construction services save them time and money. The modern flexible design also saves on initial investment and future maintenance.

**Call on McCloskey** before you plan your new building or plant. Learn how you can get the best buildings and at the same time save money. Write McCloskey Company of Pittsburgh, 3412 Liberty Avenue, Pittsburgh 1, Pa.

# **McCloskey Company** **of Pittsburgh**

# An Important Message To All Firms Having a Bag Closing Operation

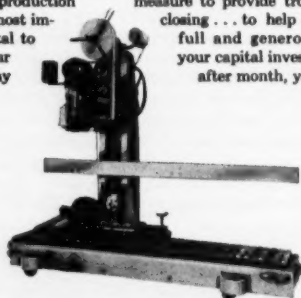
**A** GREAT DEAL OF MONEY is invested in your plant. To justify that investment, your equipment, raw materials and labor must be coordinated to produce a finished, profit-earning product.

If one link in your production-chain breaks down, and the entire operation comes to a halt—you lose money.

A bag closing machine is only one link at the end of your production line. We consider it a most important link . . . as vital to the daily success of your plant's operation as any

other link in the chain.

We have built into our Bagpak® extra margins of precision and strength to reduce the risk of breakdowns to as near the vanishing point as possible. Welded steel construction, heavy-duty working parts, precision sewing units—plus the extra insurance of expert service by Bagpak engineers—all these have been added in full measure to provide trouble-free bag closing . . . to help you assure a full and generous return on your capital investment, month after month, year after year.



Full details and specifications on the better Bagpak® will be sent to you on request. Ask for brochure 260 C

## International Paper Company

**BAGPAK**  
DIVISION

220 East 42nd St., New York 17

BRANCH OFFICES: Atlanta • Baltimore • Baxter Springs, Kansas • Boston • Chicago • Cleveland • Denver • Los Angeles • New Orleans • Philadelphia • Pittsburgh • St. Louis • San Francisco.  
IN CANADA: The Continental Paper Products, Ltd., Montreal, Ontario.

please pass  
the nitrogen!



**I**t takes a lot of sugar cane to satisfy America's sweet tooth. And for making such varied items as drugs, plastics, solvents, cattle feeds, wax, anti-freeze, and paper, to name a few. This year more sugar cane is needed than ever before. How are we going to get it? With nitrogen. No single factor is as important for boosting cane yields and increasing per-acre harvests.

Of all the sources of nitrogen, anhydrous ammonia is the most concentrated and the most economical. It is this preferred form that CSC produces at its Sterlington plant in Louisiana. Most of CSC's production is used to increase the crop yields of Gulf Coast farming land.

AGRICULTURAL DIVISION  
COMMERCIAL SOLVENTS CORPORATION  
17 EAST 42ND STREET, NEW YORK 17, N.Y.



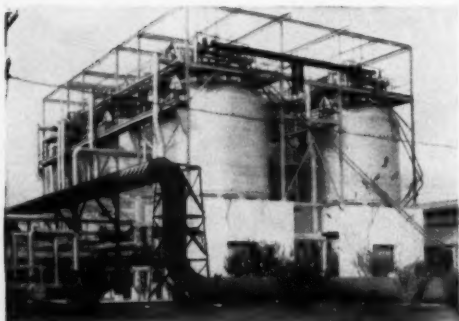
# SULPHUR

**\*Interesting Facts Concerning This Basic  
Raw Material from the Gulf Coast Region**

## **\*SUPERHEATED WATER ...**

Mining operations are most successfully carried out if the water pumped

into the sulphur deposit is heated under pressure to a temperature of about 320° F. For large scale mining, enormous quantities of water are required, so, a primary requisite is an adequate supply of suitable water and an efficient power plant in which to heat it.



To insure a continuous supply of water at Newgulf, it is the practice to use river water pumped in time of flood or full flow and stored in large reservoirs. This supply is supplemented, when necessary, with well water. Water so obtained is seldom suitable for use in boilers or mine water heaters without being treated first because of natural salts in solution. Softening by chemical treatment is necessary to prevent deposition of scale on boiler tubes and hot water lines.

Loading operations at our  
Newgulf, Texas' mine



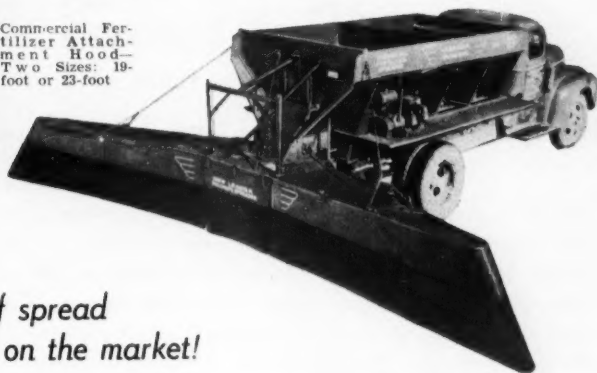
**TEXAS GULF SULPHUR CO.**  
75 East 45th St.  New York 17, N. Y. **INC.**  
Mines: Newgulf and Moss Bluff, Texas



## Here's the answer to your Spreading Problems!

**AGAIN!**  
**"The NEW LEADER"**  
**leads the field**

Commercial Fertilizer Attachment Hood—  
Two Sizes: 19-foot or 23-foot



*with its new  
"Motor-Driven Spreader"  
offering greater accuracy of spread  
with the most positive feed on the market!*

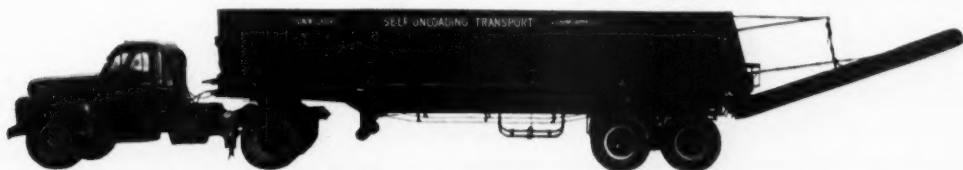
**SPECIAL ADVANTAGES**—Uniformity of spread is not dependent on truck speed. Motor is mounted on catwalk and drives only the twin distributor discs at a constant speed, assuring full width of spread at all times together with uniform distribution.

Conveyor is separately driven from truck drive shaft by a series of V-belts to deliver the correct amount per acre—regardless of truck speed or regardless of whether the truck is driven in low, super-low or any other gear.

Conveyor speed is, therefore, positively synchronized with speed of the rear wheels of truck and at each revolution of the rear wheels, the conveyor moves a given distance regardless of the truck's speed. Amount of material delivered by conveyor does not vary with hilly or soft field conditions.

Spreader Body Lengths (inside measure) are 9', 11', 13' and 15'. Other body lengths on special order.

*Note: When Spreading Attachment is folded up for road-traveling position, width is approximately 7'-5"*



## "The NEW LEADER" Self-Unloading Bulk Transport

The 20-ton capacity transport above is shown with elevator in place and ready to load a NEW LEADER Spreader truck. These units are proving very profitable; in bad weather they eliminate demurrage on railroad cars; fertilizer gets to the job quickly and spreader trucks can be kept working in the field. The transport, being a self-unloading unit, leaves the tractor truck free to return to pick up another transport load. These units have four individual

compartments of 5 tons each. Each compartment may be unloaded independently of the others. Compartments and rear endgate are removable so that bagged and packaged goods may be hauled instead of bulk loads. Capacity 5 tons to 25 tons, lengths from 11 ft. to 40 ft. Written warranty with all NEW LEADER equipment. Write today for specifications, prices, etc. Fast delivery service sells fertilizer!


**FREE! Write for "The Story of a Custom Fertilizer Spreading Service".**

**HIGHWAY EQUIPMENT COMPANY, INC. CEDAR RAPIDS, IOWA**  
**MANUFACTURERS OF THE WORLD'S MOST COMPLETE LINE OF SPREADERS**



# High Grade


## International phosphates



Phosphate for  
the Manufacture of Complete Plant Foods



Natural Ground Rock Phosphate  
for Direct Application to the Soil



Phosphate for  
the Manufacture of Industrial Chemicals



Ample resources for prompt deliveries  
of large tonnages from International's  
modern mines and plants in Florida at  
Norahlyn, Peace Valley, Achan, Mul-  
berry; in Tennessee at Mt. Pleasant  
and Wales.



PHOSPHATE DIVISION

**INTERNATIONAL MINERALS & CHEMICAL CORPORATION**

General Offices: 20 North Wacker Drive, Chicago 6

## CFA Awards Essay Prizes

The 1951 Essay Contest among vocational agricultural students of Junior Colleges, sponsored by the Soil Improvement Committee of the California Fertilizer Association, is now history. The subject was "Methods of Applying Fertilizers in California." The best papers have been chosen and awards were made to their authors, President James M. Quinn announced.

Six Junior Colleges in Southern California participated this year, with a great deal of intelligent interest shown in the subject, for which much credit is due the vocational agricultural instructors of these schools. The purpose of the contest, an annual event, is to stimulate the interest of vocational agricultural students and instructors in the proper use of complete, balanced fertilizers which is a vital, but often misunderstood, practice in crop culture. Nature provided California with unusually rich, fertile soil, properly balanced in major and minor plant food elements. The intensive crop development which has followed the establishment here of our civilization has tended to deplete the soil of these vital elements. They must be replaced in the form of commercial fertilizers if we hope to continue our quality and quantity production of commercial crops, according to Quinn.

First grand award of \$50.00 and possession for the coming year of the Association's perpetual trophy went to Robert Merriam, a student at Chaffey Junior College, Ontario; second grand award, \$25.00, to Stuart

## *It Seems to Me*

by BRUCE MORAN



**It seems to me that we make progress despite confusion, and that the very confusion leads to progress. I am quite sure that the healthiest thing in the world is the kind of griping you hear at conventions and wherever else fertilizer men meet (all the others, too, I suppose) for it leads to chipping away the bland acceptance of the load with which we have been saddled.**

**It seems to me on this anniversary of our independence that we are a little more sure of continuing free than we were a year ago. Free from the hamstringing of politics. Free from the dominance of labor. Free of the overhanging shadow of the Bear that Walks Like a Man.**

**I did not say, please note, that we were free of these things. . .only that we are a little more sure of continuing free. For all it really takes is a concerted effort.**

**And that's the rub, it seems to me.**

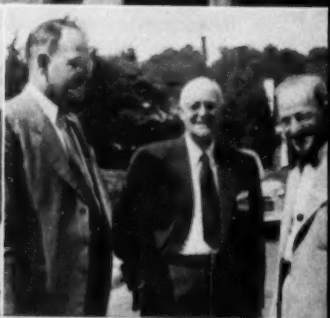
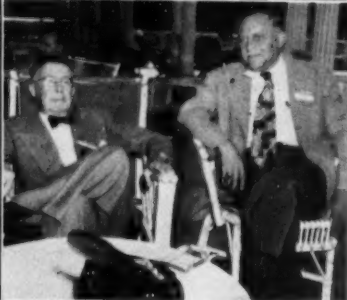
McLeod, of the C. W. Pierce School of Agriculture, Canoga Park; third grand award, \$15.00, to Jerry Gingerich, Chaffey Junior College. Joe Filippi of Chaffey J. C. and Edward Gripp of C. W. Pierce J. C. each won a \$10.00 award for next best essay in his respective school.

Sidney H. Bierley, Executive Secretary and Manager of the Association, presented the trophy to Merriam at Chaffey

Junior College.

Winners of awards for the best paper in their school in the four other Junior Colleges participating were:

Edwin Colbern, Ventura Junior College, Ventura; Dan Eidelson, Santa Ana Junior College, Santa Ana; John T. McDermot, Orange Coast Junior College, Santa Ana; Ed Huthman, Fullerton Junior College, Fullerton.



# NFA Convention

By VIRGINIA CRENSHAW

"Hard working people deserve a vacation from time to time. The experts say that they should do a better job in the days that follow. We agree with them. It is our hope that the rest you will find in these green hills will be completely relaxing and enjoyable. At the same time you will have the opportunity of hearing distinguished leaders in our national life presenting their views on the problems that challenge us all in these troubled times. Others will comment on the new agriculture to which our industry contributes so substantially

... The stage is set. May these three days be perfect ones for you — days that will be highlights in your memories of 1951!"

So read the message of welcome on NFA's 26th annual convention program. The stage was set — at The Greenbrier, White Sulphur Springs, West Va., June 12-14 — to accommodate NFA's largest convention, an attendance of 750. An excellent program had been planned with plenty of entertainment to suit every taste — top-notch speakers for the business sessions, and golf, tennis, and horseshoe pitch-

ing. The ladies came in for their share of special entertainment with a putting contest, garden party, bridge and canasta. Dinner and dancing each evening drew the crowd together again, including the night of the banquet when tables were placed in every available bit of space in and around The Greenbrier's big dining room. Two large cocktail parties were given (to which the entire membership was invited), one on Monday, June 11th, by H. J. Baker & Bro., the other on Tuesday, June 12th, by the officers of International Minerals and Chemical Corporation.

Prior to the general meetings on Tuesday and Wednesday mornings, a meeting of the Executive Committee was held on Sunday, and on Monday a meeting of the Board of Directors and an open meeting of the Plant Food Research Committee at which there was a special presentation by the Corn Subcommittee on "More Corn for America". Participants were: Proctor W. Gull, Agronomist, Spencer Chemical Co., Borden S. Chronister, Chief Agronomist, Southern Division, Barrett Division, Allied Chemical & Dye Corp., Murry C. McJunkin, Northeastern Agronomist, Coke Oven Ammonia Research Bureau, George V. Taylor, Director of Market Research, Spencer Chemical Co.

NFA Board Chairman J. E. Totman, who presided at both general sessions on Tuesday and Wednesday, and NFA President

Gull

McJunkin

Chronister

Taylor

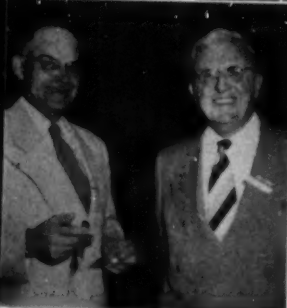
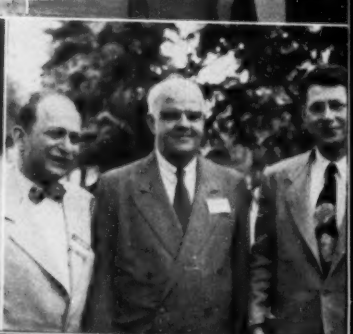


## STAFF PICTURES OF NFA CONVENTION

1. Mr. & Mrs. Dean Gidney, U. S. Potash Co., New York, Russell Coleman, NFA, Washington. 2. Mrs. Weller Noble, Berkeley, J. M. Coppinger, International Minerals & Chemical Corp., Chicago, Mrs. J. P. Brinton, Jr., New York, Mrs. Norman Into, Chicago, J. C. L. Straughn, American Potash & Chemical Corp., Atlanta, Tom Davies, Synthetic Nitrogen Products Corp., Columbia, Frank M. Feffer, Jr., Arizona Fertilizer Co., Phoenix. 4. Ray King, Georgia Fertilizer Co., Valdosta, Weller Noble, Pacific Guano Co., Berkeley, Tom Tremearne, U. S. Dept. of Agriculture, Washington. 5. A. D. Kincaid, Southern Cotton Oil Co., Columbia, J. O'H. Sanders, Fulton Bag & Cotton Mills, Atlanta. 6. Jos. Hicks, Commonwealth Fertilizer Co., Russellville, T. W. Allen, Sand Mountain Fertilizer Co., Attalla, W. B. Howe, French Potash & Import Co., New York. 7. Mr. & Mrs. A. A. Schultz, and Mr. & Mrs. Allen Willis, Reading Bone Fertilizer Co., Reading. 8. Mr. & Mrs. George Moyers, International Minerals & Chemical Corp., Chicago, J. B. Schrock, Schrock Fertilizer Service, Congerville. 9. B. D. Cloaninger, Clemson Agric. College, Clemson, George W. Savitz, International Minerals & Chemical Corp., New York,

Rodney C. Berry, Association of American Fertilizer Control Officials, Richmond. 10. Mrs. John W. Hall, Washington, Dr. & Mrs. H. B. Mann, American Potash Institute, Washington, Mrs. W. E. Shellburne, Atlanta. 11. Mr. & Mrs. C. R. Martin, Mr. & Mrs. C. F. Martin, of Miami Fertilizer Co., Xenia, Joe Stough, International Minerals & Chemical Corp., Chicago. 12. Frank M. Feffer, Jr., Arizona Fertilizer Co., Phoenix, Trenton Tunnell, Ashcraft-Wilkinson Co., Atlanta, John Foy, Ashcraft-Wilkinson Co., Tampa, Lattane Temple, Temple Cotton Oil Co., Little Rock, Eugene German, Duval Sulphur & Potash Co., Houston. 13. Mr. & Mrs. C. H. Taylor, Longhorn Brokerage & Engineering Co., Mr. & Mrs. D. H. McKinney, Red Star Fertilizer Co., all of Sulphur Springs. 14. Mrs. Jack Rutland, Chicago, Graham Campbell, Chamberlain & Barclay, Inc., Cranbury, Earl Gettinger, Woodward & Dickerson, Inc., Philadelphia, Gordon Crockett, Chas. Page & Co., New York, Mrs. Earl Gettinger. 15. Chester Venable, Tennessee Farmers Coop., Nashville, Ray Sorensen, Iowa Plant Food Co., Des Moines, Ed Kitchen, Pacific Coast Borax Co., East Alton.







## NFA OFFICERS

J. E. Totman, Chairman of the Board; Louis Ware, Vice-Chairman; Russell Coleman, President; F. S. Lodge, Secretary-Treasurer.

Russell Coleman presented annual convention addresses (given in full elsewhere in this issue); other addresses given by Honorable Clinton P. Anderson, U. S. Senator from New Mexico, "Number Your Freedoms", Edwin G. Nourse, Author and Economist, "Inflation is Fun While it Lasts", and E. J. Condon, Assistant to the President, Sears, Roebuck and Company, and President of Friends of the Land, "Farmers On The March", are given in part on page 29.

## KEY TO PICTURES

1. O. S. Deming, Joe Ann Deming, Gene Van Deren, all of Bluegrass Plant Foods, Cynthia. 2. Johnny Gruber, Baltimore, Wm. R. Huck, Norfolk, both of St. Regis Paper Co. 3. Harry Baylor, of Charles Town, A. H. Sterne, Tennessee Corp., Atlanta. 4. J. P. Brinton, Jr., Hydrocarbon Products, New York, C. A. Woodcock, St. Regis Paper Co., Chicago. 5. Mr. & Mrs. E. S. Russell and John Russell, Old Deerfield Fertilizer Co., S. Deerfield. 6. C. E. Littlejohn, U. S. Potash Co., Columbus. 7. Mr. & Mrs. "Buck" Appleton, Potash Company of America, Atlanta. Mr. & Mrs. A. O. Hallman, Blytheville Fertilizer Co., Blytheville. 8. Mr. & Mrs. Claude Hyrd, Spencer Chemical Co., Kansas City. 9. R. C. Dancy, Jackson Grain Co., Tampa, J. A. Nafel, Pacific Coast Borax Co., Auburn. 10. Jimmy Henderson, Jr., Savannah, and W. G. Grahm, Tampa, both of H. J. Baker & Bro. 11. Mr. & Mrs. C. S. Rauh, E. Rauh & Sons Co., Indianapolis. 12. J. R. Harding, Peoples Fertilizer Co., Foley. C. H. Elrod, International Minerals & Chemical Corp., Montgomery. 13. John Moor, Sturtevant Mill Co., Atlanta. 14. W. E. Schaffnit, Stedman Foundry & Machine Co., Philadelphia. R. M. Pitcher, Colorado Plant Food Co., Rocky Ford. 15. B. A. Crady, U. S. Potash Co., Meridian. George Dunklin, Planters Fertilizer & Soybean Co., Pine Bluff. 16. Mr. & Mrs. Ed Barnes, U. S. Potash Co., New York. 17. Harry Kriegel, Wessel, Duval & Co., Inc., New York, Frank R. Jackie, Frank R. Jackie, New York, W. E. Sawyer. 18. Fred Purcell, Combustion Engineering-Superheater, Inc., John C. Moor, Sturtevant Mill Co., both of Atlanta. 19. Mr. & Mrs. Joe Stough, International Minerals & Chemical Corp., Chicago. 20. Philip McG Shuey, Shuey & Co., Savannah, James E. Cope, Reliance Fertilizer Co., Savannah. 21. Mr. & Mrs. Lee Turner, International Paper Co., Baltimore.

# BEYOND THE IRON CURTAIN

By DR. RUSSELL COLEMAN\*

Today everyone from the man on the street to the man in the White House has a solution to our foreign policy. The title which I have chosen suggests that I, too, have found a secret formula for raising the Iron Curtain. Let me assure you in the outset that I claim to know nothing about what is going on behind the Iron Curtain today. I believe I know, however, the fundamental reason that an Iron Curtain exists. My thesis on this subject is a simple one—so simple, in fact, that its importance in shaping world affairs has probably been underestimated.

The basic factor which has governed man's action since he found himself in the Garden of Eden is food. Eve set the pattern when she disappointed her Creator to eat the forbidden fruit. The quest for food governed the movement of the early nomads as well as the early settlers. America was first settled by people seeking to worship God in their own way, but the success of this venture was not assured until a solution to the food production problem had been found. As a basis for my brief discussion I should like to emphasize that food has been and will continue to be the first factor in determining men's action.

It's difficult for us in America to realize this elementary fact because food is so plentiful here. It's much easier for us to place

significance on diplomatic moves, philosophic discussions and idealistic solutions to the world's problems. Let's keep in mind that people are not interested in politics, economics or society until they first have food. Man is a social being only so long as he is well fed. When he is hungry, he is merely another animal. Now if we in America can only understand this simple basic principle and realize that today more than 50 percent of our world's population is hungry, then we can probably be more realistic about our international problems and their solution. Let's apply our simple basic concept to the development and expansion of Communism, not trying to look behind, but rather beyond the Iron Curtain.

There is an old Russian proverb which says "An empty stomach knows no law." Perhaps this is the basis for Karl Marx's Communist Manifesto and if not, it would seem to have guided the Communist policy more than any other factor. Communism succeeded in Russia primarily because the people hoped that through this movement they could improve their lot, especially their food supply. Its expansion in China, India, Korea and other areas has occurred because of promises for more food and the hope of their fulfillment. It is significant that Communism has progressed only in those countries with inadequate food.

In referring to the Asiatic situation before the national Con-

\* Address of Dr. Russell Coleman, President, The National Fertilizer Association's 26th Annual June Convention, June 11-13, White Sulphur Springs, West Virginia. Presented on June 13.

gress, General MacArthur recently said:

"What the peoples strive for is the opportunity for a little more food in their stomachs, a little better clothing on their back, a little firmer roof over their heads and the realization of the normal nationalist's urge for political freedom."

It is significant that his first reference is to food. A desire for food has not only been used for recruiting new party members in the Orient, but even in America Communists have approached hungry strikers with food in one hand and a membership card in the other.

Throughout history food has stood between war and peace. It may be a coincidence that the birth of Communism, a scheme for dividing the world's food supply, and the discovery of chemical fertilizers, a means of increasing the world's food supply, occurred at almost the same date in history. The truth is that until that time, the middle of the nineteenth century, people knew no adequate means of solving their food production problem. There was no method of economically replacing in sufficient quantities the plant food which was being removed from the soil in food crops by a steadily growing population. As a result, permanent peace could hardly be realized.

The discovery and the development of chemical fertilizers changed this picture, for today chemical fertilizers offer an effective means of supplying the plant food needed to solve our food production problem. Despite this knowledge today, few nations are completely replacing the plant food removed from

#### NFA Board Elections

Acting on the report of H. B. Fultz, chairman of the Nominating Committee, NFA members have chosen the following as directors-at-large for the full 3-year term: L. G. Black, Ark.-Mo. Plant Food Co., Corning, Ark.; A. D. Kincaid, Southern Cotton Oil Co., Columbia, S. C.; John A. Miller, Price Chemical Co., Louisville, Ky.; and C. T. Prindle, Swift & Co., Chicago, Ill.

These men were reelected directors of the following districts: (1) E. S. Russell, (2) A. A. Schultz, (4) A. W. Weaver, (5) J. H. Epting, (7) Moultrie J. Clement, (8) James W. Dean, (9) M. G. Field, (10) C. R. Martin.

their soils. Even the United States, which we think is most progressive of all, is removing from its soil about four times as much plant food annually as it is returning. A few of the other nations are doing better than this, but on the whole, our world of today faces the following outlook. Practically all the world's arable land is in cultivation and is being robbed annually of its ability to produce food. Despite this fact, the world's population continues to grow, producing more and more hungry people. The only known method of maintaining our soil's productivity is to replace the plant food removed with commercial fertilizers. The important difference between our situation today, as contrasted with the past, is that now we have a means of correcting our inadequate food supply — an obstacle to world peace. Not until the scientific discoveries and developments of our present generation has this been possible.

If by some miracle each nation would apply the known scientific improvements in methods of food production, the world's population could be fed and world peace would be possible. This, I believe, is the miracle to which

we should look to disintegrate the Iron Curtain. This miracle will not occur immediately, but it can occur in time if—and only if—there is a strong fertilizer industry with the leadership to produce enough of the right kind of plant food to do the job. I should like to emphasize that without the commercial fertilizer industry this miracle can not occur and the food problem and world peace remain unsolvable.

Our industry, therefore, has a key place in eventually determining world peace. In addition to our job of supplying fertilizer to the American farmer, we must assume such a commanding leadership in the techniques of the production and utilization of plant food that other countries will want to follow. I am certain that the food problem will not be solved by our producing the world's needs of either food or fertilizer and shipping it abroad. My opinion on this is shared to some extent by so ardent a New Deal supporter as Supreme Court Justice William O. Douglas, who after two trips to Asia, states:

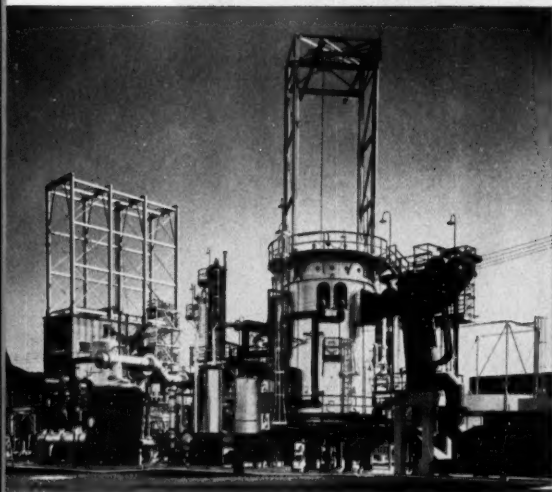
"The world is in a revolution which can not be bought off with dollars . . . The revolutions which are brewing are not, however, Communist in origin nor will they end even if Soviet Russia is crushed through war. The revolutionaries are hungry men . . ." International peace will not be secured by victory in Korea or any other place until each nation has obtained its own solution to food.

The importance of plant food in world peace places a new light on the fertilizer industry. In the past its importance to our national or international welfare

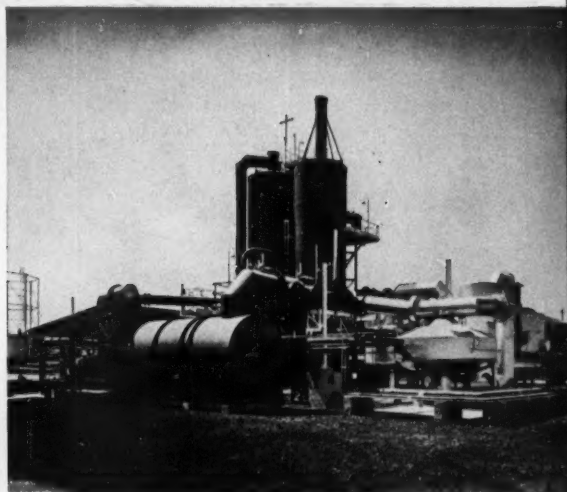
(Continued on page 64)

# New Fertilizer Plant in **MEXICO** now in operation

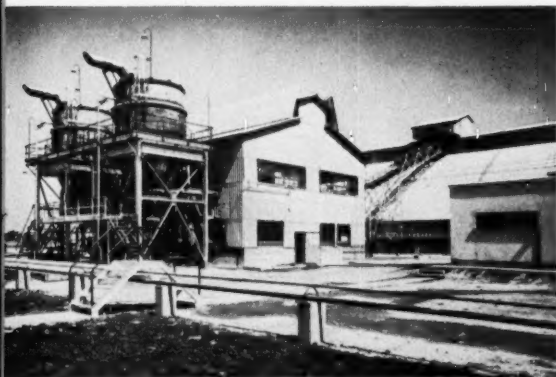
**COMPLETED BY CHEMICO**



Hydrogen from natural gas and nitrogen from the air are combined in proper proportions under pressure to form ammonia.



Sulfur, removed as an impurity from the natural gas, becomes the raw material for the manufacture of sulfuric acid.



This ammonia and sulfuric acid are combined to produce 70,000 tons of ammonium sulfate per year.

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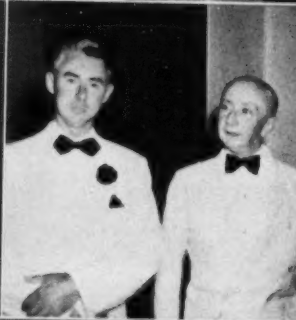
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# CASTING UP ACCOUNTS

By J. E. TOTMAN\*

May I extend to all of you personally and on behalf of The National Fertilizer Association greetings and a hearty welcome to our 26th Annual Convention. We are in the midst of turmoil and serious times. We hope our deliberations here will be helpful to our industry, our agriculture and our country.

## Supplies During Closing Year

The fiscal year just closing has seen some important, almost radical, changes in the general fertilizer set-up. The Korean war and the threat of spreading hostilities have resulted in at least a partial reversion to conditions and remedial measures of World War II. And an acute situation has developed with respect to sulfur.

During 1950, 5,192,184 tons of sulfur were produced and 5,504,714 tons were shipped, the result being that during the year above-ground stocks were reduced by 312,530 tons. The alarm-

ing factor in the situation is that at the close of the year above-ground stocks amounted, at present shipping rates, to less than six months' supply. Prior to World War II, at the close of 1939, our stocks on hand equaled almost two years' supply at the then shipping rate.

In view of the domestic supply situation, with little prospect of bringing into production new or additional sulfur sources for 1951, the Office of International Trade, Department of Commerce, set quotas of crude sulfur for export during the first six months of 1951. The announced total for the half year is 480,000 long tons, not including exports to Canada.

Exports during 1950 totaled 1,086,495 tons, not including 354,501 tons shipped to Canada. If exports during the latter half of 1951 continue at the first-half rate, total exports for 1951 will be only about 100,000 tons less than those for 1950 when no licensing program was in effect. This slight reduction will not

make any considerable contribution to the supply for United States industries. Unless there are further reductions in export quotas, sulfur for fertilizer use will continue to be in short supply.

Although sulfur is not the only source of sulfuric acid used in the fertilizer industry, it is, as you well know, the principal one. Because of the utilization of all possible supplies, including inventories as well as current receipts, the impact of the shortage has not been so critical during the present season as it quite surely will be if the situation continues.

The supply of nitrogen materials was about 20 percent, and the supply of potash was about 15 percent, greater than the supplies for the preceding year. Total consumption of all fertilizers in continental United States during the calendar year 1950 was 18,346,000 tons, an increase of more than 11 percent over the preceding year.

## Government Controls of Materials

Government control of essential materials and supplies has already begun.

A sulfur allocation order just issued prohibits the use by anyone of more sulfur in 1951 than they used in 1950.

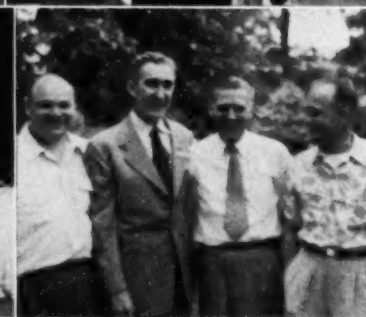
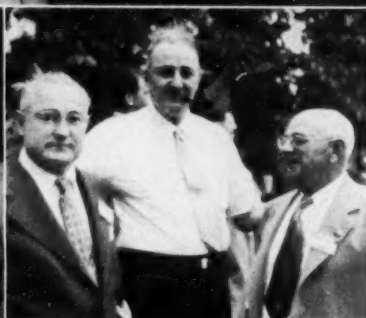
Sulfuric acid has been placed under limited allocation. Buyers and users of sulfuric acid in all States must certify to suppliers the end-uses to which this chemical would be put. In the westernmost eleven states, specific authorization by the National Production Authority to use or deliver sulfuric acid is required. In the other States, suppliers must file applications with NPA

\* Delivered at the 26th Annual Convention, The National Fertilizer Association, White Sulphur Springs, West Virginia, June 12, 1951.

## KEY TO NFA CONVENTION PICTURES

1. L. W. Walker, Texas Gulf Sulphur Co., New York. Judge Daniel S. Murph, NFA, Washington. 2. Mr. & Mrs. L. G. Porter, U. S. Dept. of Agriculture, Washington. 3. Geo. W. Harley, Rucker McCarty, International Minerals & Chemical Corp., Atlanta. 4. Horace Albright, U. S. Potash Company, New York. George Pettit, Potash Company of America, New York. 5. T. E. Camp, Jr., Southwest Potash Co., New York. Fred Bryan, Chilean Nitrate Sales Co., Raleigh. 6. John Moos, Sturtevant Mill Co., Atlanta. Mr. & Mrs. Sorenson, Iowa Plant Food Co., Des Moines. 7. Mr. & Mrs. R. C. McCall, Marietta Concrete Corp., Marietta. 8. J. R. Riley, Jr., Spencer Chemical Co., Kansas City. 9. Mr. & Mrs. Tom Bridgers, Farmers Cotton Oil Co., Wilson. 10. Dr. Fielding Reed, Atlanta. J. W. Turrentine, Washington, both of American Potash Institute. 11. Mr. & Mrs. H. L. Beckman, Welcome Agricultural Chemical Co., Welcome. 12. Mr. & Mrs. Billy Doyle, Sturtevant Mill Co.,

Boston. 13. C. D. Shallenberger, Shreveport Fertilizer Works, Shreveport. Mrs. Ira Moss, Shreveport. 14. A. D. Kincaid, Southern Cotton Oil Co., Columbia. Frank Littlefield, Mente & Co., Inc., Savannah. 15. Bill Lehmann, Chilean Nitrate Sales Corp., New York. Bill Schaffnit, Stedman Foundry & Machine Co., Philadelphia. Sinclair B. McCoy, Chicago, and W. L. Baughcum, Atlanta, both of International Minerals & Chemical Corp. 16. Mr. & Mrs. W. S. Tyler, Longhorn Brokerage Co., Sulphur Springs. 17. Dr. & Mrs. J. K. Plummer, Tennessee Corp., Atlanta. 18. M. S. Hodgson, Empire State Chemical Co., Athens. Harry Arnold, H. M. Arnold Fertilizer Co., Monroe. R. R. Fowler, Fowler Fertilizer Co., Covington. Hoke McConnell, McConnell & Co., Royston. 19. W. A. Webster, Quaker Oats Co., Chicago. B. B. Fall, The Rogers & Hubbard Co., Portland, Conn. 20. Tom Rogers, and George Suggs, both of Barrett Division, New York.



but may use sulfuric acid, or deliver it to a purchaser who has filed a certificate of proposed use, without express authorization unless otherwise directed by NPA. To date there has been no government allocation of other fertilizer materials.

Controls of steel, copper and aluminum are now scheduled for July 1, with perhaps controls of other materials accompanying or following. On the assumption that the present world conditions will continue, the impact of such controls on the fertilizer industry will become more and more pronounced with the passing of time.

NPA Regulation 4, issued on February 27, permitted business enterprises, under certain conditions, to apply priority ratings to orders for maintenance, repair and operating supplies. On April 16, NPA issued an amendment to the Regulation which canceled, as to certain commodities, out-

(Continued on page 66)

## KEY TO PICTURES

1. J. E. Totman, Summers Fertilizer Co., Baltimore. 2. W. A. Webster, Quaker Oats Co., Chicago. 3. John Reynolds, Bethlehem Steel Co., Bethlehem. 4. Murry McJunkin, State College, Pa., and H. H. Tucker, Columbus, both of Coke Oven Ammonia Research Bureau. 5. Senator & Mrs. Clinton Anderson, Washington, D. C. 6. Mr. & Mrs. Louis Ware, International Minerals & Chemical Corp., Chicago. 7. Frank Greeley, Fulton Bag & Cotton Mills, New Orleans. 8. Maurice London, Hudson Pulp & Paper Corp., New York. 9. G. A. Foss, Kelly-Weber & Co., Lake Charles. 10. Mr. & Mrs. M. Tegtmeyer, and daughter, Fay, Synthetic Nitrogen Products Corp., New York. 11. Stephen J. Andrejkovics, Nicolay Titlestad Corp., New York. 12. William R. Scanlan, Phillips Chemical Co., Bartlesville. 13. Gordon Cunningham, Tennessee Corp., Atlanta. 14. W. Gedge Gayle, Kelly, Weber & Co., Lake Charles. 15. Mr. & Mrs. J. H. Epling, Epling Distributing Co., Leesville. 16. Mrs. J. A. Naftel, Auburn. 17. Mr. & Mrs. A. A. Schultz, Reading Bone Fertilizer Co., Reading. 18. Tom Athey, Albemarle Paper Mfg. Co., Richmond. 19. Mary Payne Cole. 20. Albert Woods, Potash Company of America, Raleigh. 21. Mr. & Mrs. Chas. McDowell, Winter Haven. 22. Gordon Cunningham, Tennessee Corp., Atlanta. 23. Leroy Donald, Lion Oil Co., El Dorado. 24. Wm. Lowry, International Harvester Co., Chicago. 25. E. N. Shelton, Tennessee Corp., Atlanta.



## OTHER NFA SPEAKERS BRIEFED

Senator Clinton P. Anderson

Freedom from want gets right down to the essentials of life. The really basic wants are for food and clothing and shelter — products of the soil. The fight for freedom from want therefore becomes a sort of "battle of the soil." Win this and we have laid the foundation for the security—for the freedom from fear—which must be the basis for any lasting peace in the world.

You men of the fertilizer industry are obviously right in the front lines of the drive to produce enough of these essentials to carry us safely past the present period of world tension and social upheaval. Your products are a "must" in any plans to raise the level of food and fiber production, and I know you are fully aware of your obligations as well as your commercial opportunities.

Much has been said and written about the problem of food. Brushing aside details, the simple fact is that far more than half the world's population is today badly undernourished, much of it facing the threat of actual starvation. I am not talking about the statistics of relative diets, or the mathematics of calories, but about the stark reality of just not enough food to sustain life and normal activity.

Let's explore the significance of this a little, from the point of view of the world problems which are forcing us—for the third time in little more than a quarter of a century—to spend billions for national defense.

It takes very little imagination to know what happens to individuals when they are hungry, and none at all when they face actual starvation. They will go to any lengths to satisfy the fundamental human need for food. They will very easily go outside the law. We recognize this fact, but we give too little thought to what happens—to whole peoples—

(Continued on page 70)

Edwin G. Nourse:

Inflation is a good deal like Sin. Almost everyone disapproves of it in public, but it gets a great deal of acceptance and self-indulgent practice in private. We all want the other fellow to stop inflation but try to protect ourselves by public measures or private devices that add up to a general inflationary process. This inflation boomerangs back on the economy and hurts everybody. That means it hurts—it weakens—our country.

If any credit can be taken for the fact that prices didn't continue steadily up even at the height of the change-over it must be given to the action of Congress in initiating tax increases last fall and to the Federal Reserve System's tightening up on credit. But these are by no means enough. Inflation is still a threat. President Truman put the matter the other day: "If we let inflation run away, the Russians will have won the cold war without firing a shot." Charles E. Wilson reports to the country that we have the problems of physical production licked but that inflation threatens to upset that program.

In the two major areas of inflationary danger and inflation control — deficit financing and market manipulation — we have not settled down to show that we intend, know how, or are willing to deal with this threat to our security. From V-J Day to the invasion of Korea, we took the easy short-cut road to prosperity—that is inflationary prosperity. We did not settle down to adjust peacetime income and market relations on a basis which would give us sustained high-level production in a peacetime economy. As I read the record, we would have had to face a show-down on that issue by the latter part of 1950 or certainly by the present time if Korea had not given us a new whirl of big government spending, big industrial spending, big consumer

(Continued on page 71)

E. J. Condon:

Today in wide areas of the world, nineteen fifty-one airplanes look down on farming practices that were considered ancient in the time of Christ. This fact was brought to my attention with renewed force just a few days ago. I flew to Mexico in the company plane last week and visited several of the larger cities. I stopped at a shoe factory at Guadalajara that was just as efficient as anything that could be found in Boston or St. Louis. I visited a steel plant—a new large steel plant in Monterey—that was a model of efficiency and engineering skill. But flying over the Mexican countryside, and even driving down their main highways, I could see little of this technical or scientific aid applied to their agriculture. Despite its importance in the national economy the fact that most of the people in the Nation twist their living from the land, their agricultural practices seem to be changeless, and almost as old, as the mountains that look down upon them. That there is a direct connection between this fact and the miserable standard of living of the Mexican farmer, I'm sure you have no doubt.

From the best archeological evidence available, the tilling of the soil has been practiced in one or another part of this old globe for somewhere between ten and twelve thousand years. Isn't it more than a little remarkable, therefore, that most of our own improvements in agriculture has been in the last one hundred years. And the fact that that same period of a hundred years practically covers the entire existence of the fertilizer industry as an industry, is, I can assure you with complete candor, something more than an accidental coincidence. But the most recent twenty-five years—in the single generation just closing this constantly accelerating march of agricultural attain-

(Continued on page 73)

### TVA AND NFA TO EXCHANGE DATA

TVA and the National Fertilizer Association have signed a memorandum of understanding providing for increased exchange of information in the fields of fertilizer research, production, distribution, and use. The new agreement follows several years of informal cooperation in these fields.

The understanding provides that each party will (1) appoint a committee to consult on board policies of mutual interest, and (2) appoint a technical committee to meet regularly to exchange information, review fertilizer research and development programs, and discuss and recommend problems for study, each party to designate a staff member to serve as a liaison agent.

TVA will (1) use its fertilizer and munitions research facilities to the extent feasible for the purpose of conducting research and experimentation on problems relating to fertilizer processing and manufacture as agreed upon by the technical committees, and (2) continue to publish and make available to NFA and its members, as well as to others, the results of research in these fields in accordance with TVA's established policy.

The Secretary of Agriculture and the Secretary of the Interior will each be invited to designate a representative to be kept informed as to meetings and, when appropriate, to participate.

### NFA Men's Golf Winners

June 11: Low Gross: Winner, J. Porter Brinton, Jr., Hydrocarbon Products Company, New York City; runner-up, R. H. Hodgson, Union Bag & Paper Company, Atlanta, Ga. —Low Net: Winner, Dean R. Gidney, U. S. Potash Company, New York City; runner-up, John J. Weldon, E. Rauh & Sons Fertilizer Company, Indianapolis, Ind. —Match Play: Winner, William A. Harris, St. Regis Paper Company, Chicago, Ill.; runner-up, Byron E. Herlong, Foremost Fertilizer Company, Leesburg, Fla. —Kickers Handicap: Winner, W. M. Newman, Price Chemical Company, Louisville, Ky.; runner-up, John P. Burrows, International Minerals & Chemical Corporation, Chicago, Ill.

June 12: Low Net: Winner, W. W. Chadwick, International Minerals & Chemical Corporation, New York City; runner-up, Oliver W. Terhune, The Terre Company, Rochelle Park, N. J. —Kickers handicap: Winner, A. F. Miller, Swift & Company, Chicago, Ill.; runner-up, F. W. Darner, Tennessee Corporation, Tampa, Fla. —Match Play: Winner, M. S. Hodgson, Empire State Chemical Company, Athens, Ga.; runner-up, R. L. King, Georgia Fertilizer Company, Valdosta, Ga.

Veterans: Winner, B. H. Jones, Sunland Industries, Fresno, Calif.; runner-up, John E. Powell, The Smith Agricultural Chemical Company, Columbus, Ohio.

Guest Golf: Winner, G. N. Hoffer; runner-up, Neil Bass—Low Gross:

Winner, R. H. Linderman; runner-up, John R. Rice.

June 13: Low Gross: Winner, C. M. Campbell, Union Bag & Paper Corporation, New York City; runner-up, Tom L. Jones, Arkell and Smiths, Columbus, Ohio. —Match Play: Winner, Weller Noble, Pacific Guano Company, Berkeley, Calif.; runner-up, T. E. Bradley, Potash Company of America, Peoria, Ill. —Medal Play: Winner, L. Proctor Thomas, Mathieson Chemical Corporation, Houston, Texas; runner-up, E. W. Cecil, Kentucky Fertilizer Works, Winchester, Ky. —Kickers handicap: Winner, R. S. Rydell, Swift & Company, Chicago, Ill.; runner-up, J. M. Coppinger, International Minerals & Chemical Corporation, Chicago, Ill. —Cyanamid Cup: Winner, Howard C. Peterson, Jr., Arkell and Smiths, New York City.

### NFA Women's Golf Winners

Low Gross: Winner, Mrs. Charles S. Rauh, Indianapolis, Ind.; runner-up, Mrs. A. Norman Into, Chicago, Ill. —Low Net (medal play): Winner, Mrs. Louis Ware, Jr., Chicago, Ill.; runner-up, Mrs. John B. Sanford, Atlanta, Ga. —Kickers handicap: Winner, Mrs. J. E. Totman, Baltimore, Md.; runner-up, Mrs. George H. Gleason, New York City—Golfers' putting: Winner, Mrs. Sydney K. Bradley, Greenwich, Conn.; runner-up, Mrs. T. S. Whitsel, Atlanta, Ga.; consolation, Mrs. Dean R. Gidney, New York City—Non-golfers' putting: Winner, Mrs. Frank Ken-

nedy, Peoria, Ill.; runner-up, Mrs. Horace M. Albright, New Rochelle, N. Y.; consolation, Mrs. H. J. Trammell, Texarkana, Texas.

### Door Prize Winners At NFA Bridge Party

Mrs. Franklin Farley, Winnetka, Illinois; Mrs. W. L. Gay, New York City; Mrs. R. C. McCall, Worthington, Ohio; Mrs. John E. Powell, Columbus, Ohio; Mrs. James O'H. Sanders, Atlanta, Georgia; Mrs. W. E. Synder, Los Angeles, California; Mrs. Carl Sparks, Seymour, Indiana; Mrs. Charles H. Tyler, Sulphur Springs, Texas; Mrs. Proctor Thomas, Houston, Texas.

### Door Prize Winners At NFA Banquet

Mrs. James F. Lind, wife of Congressman Lind, York, Pennsylvania; Mrs. William D. Lamb, Pittsburgh, Pa.; Mrs. Edward M. Kolb, New York City; Mrs. G. W. Huldum, Jr., San Francisco, Calif.; and Mrs. W. W. Johnson, Cleveland, Ohio.

### NFA Tennis Winners

Men's Singles: George N. Burns, Chase Bag Co., Chicago, Ill., defeated Wiley W. Ellis, Indiana Farm Bureau, New Albany, Ind. Women's Singles: Mrs. Frank Seymour, Goldsboro, N. C. and Mrs. Alice P. Morgan, Chicago, Ill., semi-finalists—finals rained out. Rain prevented completion of both the men's and mixed doubles.

### NFA Horseshoe Pitching Winners

Doubles: Paul R. Regan, American Cyanamid Company, New York, N. Y., and Wayne Yoder, American Cyanamid Company, Lancaster, Pa.; runners-up, H. Gordon Cunningham, Tennessee Corporation, Atlanta, Ga., and W. Gedge Gayle, Kelly, Weber & Company, Lake Charles, La. —Singles: R. William Scanlan, Phillips Chemical Company, Bartlesville, Okla.; Dean R. Gidney, U. S. Potash Company, New York City, runner-up.



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# FERTILIZER ADVISORY COMMITTEE MEETING

The Fertilizer Industry Advisory Committee was told in a meeting with U. S. Department of Agriculture officials June 18 that the Department has no thought of allocating fertilizer at this time.

Department officials made the statement in answer to a direct question from the committee, following considerable discussion as to the possibility of meeting shortages of nitrogen and phosphate fertilizers. The committee also was told by Department officials that an increase in productive capacity of 500,000 tons of nitrogen—40 percent more than present capacity—is needed in the immediate future. Because of food demands of this nation's increasing population, an additional 100,000 tons production will be needed each following year.

As a means of conserving phosphates in light of the present sulfur shortage, the Committee suggested that regional meetings of State agricultural officials, State experiment stations, State and Federal fertilizer specialists, and the industry be encouraged, in order to consider possible changes in fertilizer formulas to stretch available phosphate supplies. Department officials agreed that this local cooperative approach to the problem would be better than any Federal action to control formulas at this time.

In opening the meeting, Gus Geissler, Administrator, Production and Marketing Administration, said that food and fiber disappearance during the past year exceeded 1950 production and "could be higher than we can produce this year." He said that it would take good crops this year to meet current food and fiber demands. With crop acreage now close to the maximum for sustained production, the PMA Administrator said that one of the major factors in obtaining greatest production from this acreage would be adequate supplies of fertilizer.

The Fertilizer Industry Advisory Committee is one of a number of committees appointed earlier this year by Secretary of Agriculture Charles F. Brannan to assist and advise the U. S. Department of Agriculture in effectively mobilizing the Nation's agricultural resources under the defense program. Recommendations of the committees are advisory, for the consideration of the Department. The industry advisory committee meeting was held under the chairmanship of L. B. Taylor, director of the Materials and Facilities Branch, Production and Marketing Administration.

The Fertilizer Industry Advisory Committee includes 28 industry members, representing all major segments of the industry. Members

attending the meeting were:

Horace M. Albright, U. S. Potash Co., New York, N. Y.; Richard E. Bennett, Farm Fertilizers, Inc., S. Omaha, Nebr.; James D. Dawson, Jr., Fidelity Chemical Corp., Houston, Texas; Ralph B. Douglass, Smith-Douglass Co., Inc., Norfolk, Va.; A. M. Eno, G.L.F. Soil Building Service, Ithaca, N. Y.; B. B. Fall, The Rogers & Hubbard Co., Portland, Conn.; M. G. Field, Meridan Fertilizer Factory, Hattiesburg, Miss.; Geo. W. Gage, Anderson Fertilizer Co., Inc., Anderson, S. C.; J. Ross Hanahan, Planters Fertilizer & Phosphate Co., Charleston, S. C.; Charles E. Heinrichs, Virginia-Carolina Chemical Corp., Richmond, Va.; Cecil A. Johnson, Agricultural Products Co., Webster City, Iowa; B. H. Jones, Sunland Industries, Inc., Fresno, Calif.; M. H. Lockwood, International Minerals & Chemical Corp., Chicago, Ill.; Ray E. Neidig, Balfour-Guthrie & Co., Ltd., San Francisco, Calif.; J. E. Nunnally, Cotton Producers Association, Atlanta, Ga.; C. D. Shallenberger, Shreveport Fertilizer Works, Shreveport, La.; Mac C. Taylor, Oregon-Washington Fertilizer Co., Seattle, Wash.; W. N. Watmough, Jr., Davison Chemical Co., Baltimore, Md.; Fred J. Woods, The Gulf Fertilizer Co., Tampa, Fla.

Government agencies other than the Department of Agriculture represented at the meeting included the Atomic Energy Commission, Tennessee Valley Authority, National Production Authority, Office of Price Stabilization, Economic Stabilization Agency, Economic Cooperation Administration, the U. S. Department of State, U. S. Department of the Army, and the Bureau of the Budget.

## KEY TO NFA CONVENTION PICTURES

1. Ralph Boynton, U. S. Potash Co., Atlanta. 2. J. W. Porter, Apco Fertilizer Co., Ripley. 3. Frank Greeley, Fulton Bag & Cotton Mills, New Orleans. Mr. & Mrs. Bryant Cooper, Home Guano Co., Mullins. H. J. Wenrenbrecht, Bemis Bro. Bag Co., New Orleans. Mrs. J. O'H. Sanders, Atlanta. Roy Gurkin, Fulton Bag & Cotton Mills, Atlanta. 3. Franklin Farley, International Minerals & Corp., Chicago. S. L. Nevins, Mathieson Chemical Corp., Baltimore. 4. Mrs. John Perryman, Newnan. J. H. Daughtridge, Du Pont Co., Wilmington, Del. Mrs. E. A. Crady, Louisville. 5. Mrs. George Monkhouse and Mrs. George Huidrum, both of San Francisco. 6. Helen, Brenda and Mary Charles Conlee, and Walter Crady, North American Fertilizer Co., all of Louisville. 7. Mrs. Ed Buhner, Louisville. Mrs. Carl Sparks, Seymour. 8. King Self, Riverside Fertilizer Co., Marks. George Dunklin, Planters Fer-

tilizer & Phosphate Co., Pine Bluff. 9. Mr. & Mrs. R. D. Martinet and C. S. Rauh, E. Rauh & Sons Fertilizer Co., Indianapolis. 10. Carl Sparks and E. J. Buhner, both of Buhner Fertilizer Co., Seymour. 11. W. G. Grahm, H. J. Baker & Bro., Tampa. T. L. Wilkerson, American Cyanamid Co., New York. Joe Culppepper, Spencer Chemical Co., Kansas City. 12. Mr. & Mrs. John Perryman, R. D. Cole Mfg. Co., Newnan. Mr. & Mrs. B. A. Crady, North American Fert. Co., Louisville. 13. Cliff Collier, Synthetic Nitrogen Products Corp., Atlanta. Hoke McConnell, McConnell & Co., Royston. H. M. Arnold, H. M. Arnold Fertilizer Co., Monroe. Gaines L. Boynton, International Minerals & Chemical Corp., Atlanta. 14. Mrs. Gedde Gayle, Lake Charles. Mrs. Lee Turner, Baltimore. Mrs. Horace Albright, New York.

## Hercules Bulletin On Application Methods

An informative new bulletin on fast, efficient spreading of limes and fertilizers is announced by Hercules Steel Products Corporation, Galion, Ohio, and may be obtained free by writing for Bulletin number 5050.





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## Agricultural Specialists Needed Abroad

Six hundred agricultural specialists from all parts of the United States are needed to represent this country abroad in technical cooperation programs, including the Point Four program, under present plans of expansion, the U. S. Department of Agriculture announced June 1.

The Department's Office of Personnel is developing a national roster of professional agriculturists to be used by the Department, and other Federal and public international organizations, in recruiting personnel for foreign assignments. Qualified specialists are urged to apply for these positions, and their employers are urged to cooperate in making their services available so that this peace-building work may proceed rapidly. Those who receive appointments will be contributing to an important share of national foreign policy, the Department advised.

## Publish "Techniques of Plant Maintenance—1951"

An extensive discussion of recent developments in problems of plant maintenance, "Techniques of Plant Maintenance—1951," has just been published by Clapp & Poliak, Inc., the management of the Plant Maintenance Show held in Cleveland last January. The new volume is a companion piece to "Techniques of Plant Maintenance—1950," and contains the proceedings of the Plant Maintenance Conference held in conjunction with the show.

It is available from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y., postpaid for six dollars.

## Rutgers Dedicates Lipman Hall

June 12 marked the dedication of Lipman Hall, agricultural science building at Rutgers University, with a distinguished roster of scientific papers, and impressive dedication exercises.

## Washington State Needs Movies on Fertilizers

We have a letter from Howard S. Kresge, Director ECA Film Project of the State College of Washington, Pullman, Washington, asking if our readers can provide him with the names of sources of 16 mm movies or 35 mm filmstrips on fertilizer or other phases of agriculture. And we have a bulletin explaining that Washington has signed up with the US Economic Cooperation Administration to screen and select films to be used in the Marshall Plan countries by ECA.

## Nutrient-Deficiency Stationery Reprinted

The four-color stationery which has been offered the industry for several years by the Committee on Fertilizers of the Soil Science Society of America is being reprinted, and a supply may be secured at \$6.85 per thousand by writing H. H. Tucker, Coke Oven Ammonia Research Bureau, 8 East Long St., Columbus 15, Ohio, who is acting for the Committee.

## US May Aid US Jute Growers

The Commodity Credit Corporation is working on plans to extend Federal aid to farmers producing kenaf, which can be used in the manufacture of burlap bags. Test planting shows this crop can be grown commercially in Florida.

## Enough Steel For Hand Farm Tools

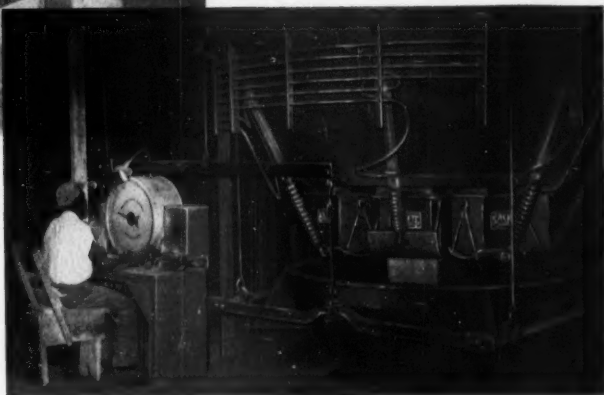
The agricultural hand tools industry will obtain sufficient steel to meet seasonal farm demands after the Controlled Materials Plan starts operating smoothly, the National Production Authority, U. S. Department of Commerce, has told the Fork, Hoe and Rake Industry Advisory Committee.





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# APFC Convention

Again at The Homestead, Hot Springs, Virginia, on June 14-17, The American Plant Food Council held its sixth annual convention drawing together a cross-section of industry members for a four day meeting. In addition to Board and committee meetings, general meetings were held Friday and Saturday mornings, and the rest of the time was given to relaxation—tennis, golf, bowling on the green, or just watching the tennis matches. And of course there was dancing every night, including the night of the banquet,—one night there was a well attended bingo game at which prizes were given. The Potash Company of America was host to the convention members at a cocktail party preceding the banquet; U. S. Senator Karl E. Mundt of South Dakota was banquet speaker.

Council President Paul T. Tru-

By VIRGINIA CRENSHAW

itt opened the convention with his annual address Friday morning, leading off an impressive list of prominent speakers. With the exception of the address given by Secretary of Agriculture Charles F. Brannan which appears in full elsewhere in this issue, we highlight as follows talks given by other speakers at both the Friday and Saturday sessions:

## "Agriculture — Our First Line of Defense" — U. S. Senator Allen J. Ellender of Louisiana:

"Tampering seriously with the present basic farm program would be a little short of national suicide," he said, and defended the economic position of the farmer who has become a "whipping boy" and "the victim of the most unjust smear campaign of modern times."

Senator Ellender charged that "pressure groups have concentrated on the farmer and have tried to at-

tribute to him all the guilt for present-day high prices," and emphasized that "there is no earthly reason why the farmer should not be afforded some protection in our economy—certainly he is entitled to a living wage, but he is powerless to deal effectively in the marketplace with the highly organized interests opposing him."

"It was because the farmer is more less helpless to cope with the odds against him that the Congress saw fit to lend him a helping hand," the Senate Agriculture Committee Chairman said, explaining that he did not regard the present farm program as "perfect" but added "there is no denying that it has worked better, and has accomplished more for the American farmer, than any other method ever devised in our nation's history."

"Unless and until a better (farm) plan can be formulated, we will do well to stay with and improve the present one," he said. "We should improve it as the needs from year to year change, but any radical alteration of the present system would be, most unwise, to say the very least. I base my conclusions upon one major premise: we must maintain a strong agricultural economy. The history of the world is replete with nations which have permitted their agriculture to wither away. England is a prime example. It has been said many times before and it will doubtless be said many times hence, as far as I am concerned, it cannot be repeated too often—that agriculture is the bedrock of our national existence and continued leadership. We must keep agriculture strong and healthy."

Senator Ellender termed the fertilizer industry one of the most vital groups in our whole program emphasizing that in backing up the

## KEY TO STAFF APFC PICTURES

1. John Hall, Washington, and Ed Smith, Baltimore, both of Potash Co. of America, Fred Courtenay, and Robert M. Nash, both of Federal Chemical Co., Louisville, W. H. "Buck" Appleton, Potash Company of America, Atlanta. 2. W. W. Johnson, Smith-Douglass Co., Norfolk, A. A. Farrell, Virginia-Carolina Chemical Corp., Richmond. 3. A. D. Strohbar, Southern Fertilizer & Chemical Co., Savannah, Maynard Jenkins, Spencer Chemical Co., Washington, Omar Sanders, American Metal Co., Ltd., New York, Louis H. Wilson, APFC, Washington, M. E. Hunter, Barrett Division, Richmond. 4. F. H. Mackay, Olds & Whipple, Inc., Hartford, Jim Rossman, Woodruff Fertilizer Works, North Haven, Walter Colvin, Barrett Division, Ironton, M. W. Whipple, Olds & Whipple, Hartford, M. E. Hunter, Barrett Division, Richmond. 5. Charles Mittelman, and H. C. Lawless, both of Kraft Bag Corp., New York. 6. W. L. Richardson, and Otto Bernhardt, both of Cooperative Fertilizer Service, Inc., Richmond, A. L. Spillman, G.L.F. Soil Building Service Baltimore, W. T. Steele, Jr., and G. B. Morris, both of Cooperative Fertilizer Service, Inc., Richmond. 7. F. G. Jordan, F. S. Royster Guano Co., Mrs. W. T. Wright, D. S. F. Thornton, F. S. Royster Guano Co., all of

Norfolk. A. M. McIver, Alex M. McIver & Son, Charleston. 8. Fred Bryan, Chilean Nitrate Sales Co., Raleigh, Bill Venable, Liberty Limestone Co., Buchanan. 9. Mrs. Ed Ryland, Mrs. I. D. Dawes, Mrs. Charles Harding, I. D. Dawes, Virginia-Carolina Chemical Corp., all of Richmond. 10. Mr. & Mrs. George Pettit, Potash Company of America, New York, greet guests at cocktail party. 11. Edwin Bay, president, National Association County Agricultural Agents, Springfield, speaker. W. B. Copeland, Smith-Douglass, Stretator. 12. W. L. Nichols, Nichols Fertilizer Corp., Norfolk. Mrs. Bill Venable, Buchanan, Mrs. Arthur Ridgewell, Norfolk, W. A. Webster, Quaker Oats Co., Chicago. 13. J. A. Monroe, Mrs. M. W. Darden, Ralph Douglass, Phil Smith, Mrs. J. A. Monroe, M. W. Darden, all of Smith-Douglass, Inc., Norfolk. 14. John Sanders, Spencer Chemical Co., Atlanta, Mrs. Sam Nevins, Baltimore, Mrs. Richard Hopkins, Houston, Mrs. John Sanders, Atlanta, Keyes Sanders, Mrs. H. R. Dinges, Kansas City. 15. Maynard Jenkins, Spencer Chemical Co., Washington, John Bennett, American Cyanamid Co., Baltimore, Omar Sanders, American Metal Co., Ltd., New York, Louis Wilson, APFC, Washington.

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farmer with the means of maintaining and increasing his yields, the fertilizer manufacturers are the key men behind the key men. Farmers are faced with a tremendous job, our men in Korea as well as ourselves here at home are dependent upon full production.

"To my mind," he continued, "the dilemma that faces the farmer can be solved only by one method. That is by a substantial increase of the efficiency of American farming. And the primary method of increasing farm efficiency is by increasing the soil productivity. . . the most practical way of increasing production over the next few years. . . is by heavier application and wider use of fertilizers,—our soil must be kept up at all costs. Today, 15 percent of our population lives on the farms and works in agricultural pursuits for 6 percent of the national income. Unless we bolster the position of the American farmer, this percentage will shrink yet more and more and some day our country will awaken and find itself critically short of basic food and fibre products."

"Agriculture is not an on-and-off proposition," he said. "You can't turn

### Key to AFPC Pictures

1. W. C. Richards, and Otto Bernhardt, both of Cooperative Fertilizer Service, Inc., Richmond. Tom Athey, Albemarle Paper Mig. Co., Richmond. 2. Mrs. O. E. Zacharias, Jr., Mr. & Mrs. W. T. Steele, Jr., all of Cooperative Fertilizer Service, Inc., Richmond. 3. Robert Ashcraft, Ashcraft-Wilkinson Co., Norfolk. A. P. Sale, Cooperative Fertilizer Service, Inc., Richmond. Gus Ashcraft and W. E. Merritts, Ashcraft-Wilkinson Co., Atlanta.
4. Mr. & Mrs. B. W. Merz, Union Special Machine Co., Chicago. Mr. & Mrs. R. B. Lenhart, G.L.F. Soil Building Service, New York. 5. J. F. Doetsch, Chilean Nitrate Sales Corp., New York. C. F. Burroughs and Frank Moore, both of F. S. Royster Guano Co., Norfolk. 6. Raymond Winkleman, M. S. Steele, Texas Farm Prod. Co., Nacogdoches. F. J. Woods, Gulf Fertilizer Co., Tampa. 7. M. C. Taylor, Oregon-Washington Fertilizer Co., Seattle. D. C. Kieffer, Smith-Douglas Co., Norfolk. Bob Nash, Federal Chemical Co., Louisville. C. A. Woodcock, St. Regis Sales Company, Chicago. 8. Bill Venable, Liberty Limestone Co., Buchanan. W. L. Waring, Lyons Fertilizer Co., Tampa. 9. Mr. & Mrs. W. B. Porterfield, U. S. Potash Co., Mr. & Mrs. W. M. Campbell, Cooperative Fertilizer Service, Inc., all of Richmond. 10. Ed Ryland, Richmond. R. R. Hull, I. P. Thomas & Son, Camden. 11. Clarence Ball, Phillips Chemical Co., Norfolk. George Savitz, International Minerals & Chemical Corp., New York, N. Y.



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on food and fibre production like a water spigot. We found that out during World War II and we will come face-to-face with it again unless our war mobilization planners give full recognition to the basic needs of agriculture. They cannot just assume that increased production from our farms will, like Topsy 'just grow' and that allocations and priorities and all the things that you and I know are needed by agriculture aren't really needed at all, and can all be given to defense industries. Agriculture is a long-term project, and any mistakes made now by our war planners will bear serious consequences for years to come."

**"Fertilizer Use in Relation to Animal Nutrition"—Dr. H. E. Myers, Head Agronomy Dept., Kansas State College, Manhattan, Kans.:**

"Satisfactory nutritional standards for the human race call for increased consumption of animal products. The human population of the world has increased and is con-


tinuing to increase at a relatively rapid rate. Therefore, even to maintain the proportion of animal products in the human diet as it now exists, it is necessary that the production of livestock products be increased. If the human dietary level is to be improved, livestock products must be increased still further. In order to increase livestock products in the United States it is necessary to increase the total feed supply. Most of the increase in feed production must of necessity come from acres already in production. This line of reasoning suggests that one of the most important considerations, so far as the effect of fertilizers on the livestock feed problem is concerned in relation to human nutrition, is to increase the total feed production. However, the quality of the feed must not be overlooked. We might think in terms of improving the feed of a single crop through fertilization, or we might think in terms of growing crops of high quality through fertilization to supplement those crops

which are of low quality with respect to certain factors. Legume crops tend to be relatively high in protein, phosphorus and calcium. Grasses tend to be lower in these constituents than do the legumes. In order to get a forage high in protein, phosphorus and calcium, we may resort to the fertilization of the grass and actually build up the levels of the three constituents in the forage. Yet a much more simple expedient is to fertilize the soil in such a manner that a high quality legume such as alfalfa can be produced."

"An inadequate total digestible nutrient intake (by farm animals) can be corrected by an increase in the quantity of feed crops produced," Dr. Myers said. "Fertilizers play a big part in quantity production. Low protein content may be corrected by producing legumes. By fertilization and lime any soil may be adapted to the production of legumes. Thus it becomes a question as to whether we adapt the soil to the crop or the crop to the soil.

# V-C

<b>V-C fertilizers</b> Complete Fertilizers    Superphosphate Concentrated Superphosphate Phospho Plaster    Sulphuric Acid		
<b>V-C phosphate rock products</b> Phosphate Rock, Ground and Unground Calcined Phosphate Rock    Nodulized Phosphatic Materials		
<b>V-C cleansers</b> The Visor® Line of Cleansers	<b>V-C fibers</b> Viscara® Textile Fibers Zylon Fibers	<b>V-C bags</b> Burlap Bags Cotton Bags Paper Bags
<b>V-C chemicals</b>		
Phosphoric Acids Phosphorus Calcium Phosphates Disodium Phosphate	Trisodium Phosphate Tetrasodium Pyrophosphate Sodium Tripolyphosphate Sodium Metasilicate	Liquid Sodium Silicates Nicotine Tetra Ethyl Pyrophosphate



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Fertilizer in cotton print bags is a welcome new source of sewing material for farm women. Nine out of every ten homemakers polled in a recent survey said they preferred to buy fertilizer packed in cotton bags. And today, when living costs are rising, economy-minded farm women appreciate more than ever the value of a container that can be converted into useful items of clothing for the family or attractive decorations for the home.

## • It's Good Business for You . . .

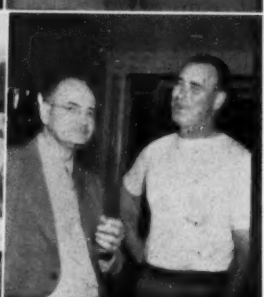
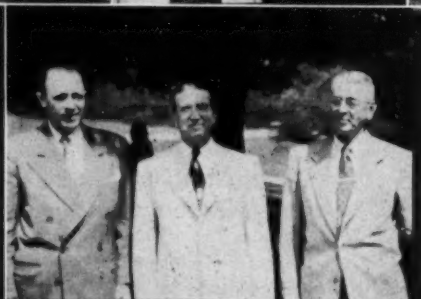
The proved, sure way to win the homemaker's vote for your brand, is to package your product in cotton. Your brand name and formula can be displayed prominently on a band label circling the bag. Choose colorful dress prints, plain white sheeting, or toweling. You'll find they all have SALES APPEAL, for the farm wife has an important wardrobe or household use for every cotton bag . . . dress print, plain, or toweling.



Your customer also knows that cotton bags save money in other important ways. Cotton bags resist costly breakage, handle easier, and are more durable for long storage. So spread the word that your product is packed in cotton. It will be GOOD NEWS to your customers and GOOD BUSINESS for you.

Ask your textile bag salesman about copies of the much-in-demand pattern booklet, "Needle Magic with Cotton Bags," for distribution to your dealers.

**NATIONAL COTTON COUNCIL • MEMPHIS, TENN.**



There is only one best answer and that is to adapt the soil to the crop. This means fertilization. If a soil is fertilized for high production, including legumes, the chances are good that some improvement in the nutrient status of the feed will be realized. Fertilization as ordinarily practiced, does not guarantee nutrient adequacy, yet the practice may go a great distance in overcoming mineral deficiencies."

**Dr. Paul D. Sanders, of Richmond, Va., editor of the Southern Planter,** spoke to the convention as moderator of an agricultural forum—subject "Fertilizers Contribution to Better Living"—featuring addresses by the top officials of the American Agricultural Editors' Association, of which he is a past president; the Association of Land-Grant Colleges and Universities, National Association of Radio Farm Directors, National Association County Agricultural Agents and National Vocational Agricultural Teachers' Association.

#### Dr. Sanders:

"If we are to eat well, maintain full employment in factories and build our military forces at home and abroad, agriculture must be assured ample plant food," Dr. Sanders said. "In any program of allocating critical materials for the war effort, the essentiality of fertilizer to high food production must be paramount."

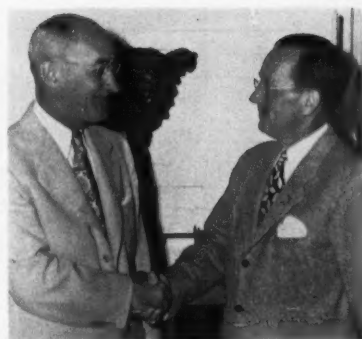
Dr. Sanders cited the birth rate on Southern farms "is nearly double

that of the rest of the country," that "we are rearing on the farms of the Southeast four boys and girls for every one we will need in the agriculture of tomorrow," and emphasized if our cities want well educated, robust citizens of good moral character, they must see to it that Southern agriculture is sufficiently sound to support a good school system, maintain adequate health and medical facilities and support the country church. This means more feed, greater emphasis on grassland agriculture to balance crop farming with stock farming. In this transition which is already sweeping the South like a prairie fire, plant food is playing a leading role."

#### Ferdie Deering, President, American Agricultural Editors' Association:

Whether used on row crops, sown crops or on pasture crops, we are finding ways to make more money from fertilizers," Mr. Deering said, and emphasized that "the Southwest is going in for fertilizers in a big way."

"Another amazing development in the Southwest," he said, "is the way in which farmers have taken to laboratory soil analysis as a means of telling them what they need in the way of plant foods. Just 10 years ago, we were using only small quantities of fertilizers compared to the older use areas. We figured our soil was not so old, not so exhausted and we had only limited authentic infor-



Paul T. Truitt (right), president of the American Plant Food Council, congratulates George E. Pettit, Vice-president, Potash Company of America, Washington, D. C., upon his election as Chairman of the Council's Executive Committee. The election was held at the Convention.

mation on what our soils needed or could use. Some of our data then is now proved wrong, and we now know that our soil fertility problems are more serious than our erosion problems were."

Mr. Deering cited the importance of visual aids and similar materials to help farmers do a better job of farming and build up their land.

"Farmers," he said, "must have some idea of how to interpret the recommendations of their soil laboratories, must understand how legumes and fertilizers fit together in a soil-building program, and they must understand what they are buying and why. They should know some of the signs of plant food deficiencies just by looking at a crop."

## KEY TO APFC CONVENTION PICTURES

1. Mr. & Mrs. L. L. Oliveros, Mr. & Mrs. Charles Paul, III, A. F. Pringle & Co. Inc., Charleston. 2. Mrs. J. A. Monroe, Mrs. Dale Kieffer, both of Norfolk. 3. John B. Whitney, Chemical Construction Corp., New York. Wallace Hicks, Wilson & Toomer Fertilizer Co., Jacksonville. 4. Paul W. Sinwell, Baugh & Sons Co., Baltimore. Billy Doyle, Sturtevant Mill Co., Boston. 5. T. L. Jefferies, Chilean Nitrate Sales Corp., Montgomery. "Buck" Appleton, Potash Co. of America, Atlanta. Steele Wright, Texas Farm Products Co., Nacogdoches. 6. F. W. Heidinger, Bennett & Clayton Co., Prospect Plains. S. P. Batchelder, Long Island Produce & Fertilizer Co., Long Island. 7. Mrs. Cecil Ariedge, Richmond. Tracy Cunningham, Armour Fertilizer Works, Atlanta. 8. Mr. & Mrs. Joe Howell, Virginia-Carolina Chemical Corp., Richmond. 9. Ralph Douglass, Smith-Douglas Co., Norfolk. George

McCarty, Ashcraft-Wilkerson Co., Atlanta. 10. T. E. Camp, Jr., Southwest Potash Corp., New York. Edwin Sterne, and Roy Camp, both of Chilean Nitrate Sales Corp. 11. Mr. & Mrs. Dean Gidney, U. S. Potash Co., New York. 12. Sid Rydell, Swift & Co., Chicago, signs the contract with Bill Copeland, Smith-Douglas, Streator. 13. W. T. Wright, F. S. Royster Guano Co., Norfolk. John Sanford, Armour & Co., Atlanta. 14. Mr. & Mrs. F. N. Strudwick, Wm. B. Tilghman Co., Salisbury. 15. C. E. Heinrichs, and C. T. Harding, both of Virginia-Carolina Chemical Corp., Richmond. 16. Keyes Sanders, Bill Schaffnit, Stedman Foundry & Machine Co., Philadelphia. 17. Frank Reed, Lion Oil Co., El Dorado. W. P. Marks, Jr., Virginia-Carolina Chemical Corp., Richmond. 18. C. M. Wallace, C. M. Wallace, Broker, Baltimore. Ed Kitchen, Pacific Coast Borax Co., St. Louis.

#### Dr. Frank R. Poole, President, Association of Land-Grant Colleges and Universities:

Dr. Poole paid tribute to the land-grant colleges and universities in terms of contributions to agricultural education and research. "To understand the complex soil and keep the agricultural lands fertile will require tremendous efforts in scientific research and comprehensive and fundamental educational enlightenment," he said, "it is not enough to know and teach symptoms. To be effective, well-planned result demonstrations and knowl-





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**Lion Nitrogen Fertilizer Solutions** — Made specifically for the manufacturing of mixed fertilizers, these products supply both ammonia nitrogen and nitrate nitrogen in the ratios desired. They are easily handled and available in three types designed for varying weather conditions, and for formula requirements in the production of fertilizers that cure rapidly, store well and drill evenly.

**Lion Ammonium Nitrate Fertilizer** — The improved spherical white pellets in this product contain a guaranteed minimum of 33.5% nitrogen. They flow freely, resist caking and store much better. Lion Ammonium Nitrate Fertilizer is shipped in 100-pound, 6-ply bags with two moisture-proof asphalt layers.

**Lion Sulphate of Ammonia** — This new, superior-type sulphate is guaranteed to contain a minimum of 21% nitrogen. Through special conditioning of the larger crystals, moisture and free acid content is greatly reduced. These factors, together with the special coating applied, make for greater resistance to caking in shipment or in storage. This product flows freely. It is shipped in bulk and in 100-pound, 6-ply bags laminated with asphalt.

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Southern  
States"



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**LION OIL COMPANY** CHEMICAL DIVISION  
EL DORADO, ARKANSAS



edge of the specific functions of the element in growing plants must be emphasized. The common technique of testing fertilizers for the most part could be discontinued in favor of fundamental research in consideration of the total needs of the plant."

"It was an extraordinary and significant phase of development when God made the world and distributed a sufficiency of the essential elements and substances for plant growth in most of the soils of the world," he said. "When scientists discovered the number and kind of elements and substances involved in the growth of plants it was a tremendous achievement. To those who understand, the nature and functions of the elements in the plant cell are among the wonders of the world even though they are masked and unseen. A plant cannot produce the essential chlorophyll in its leaves without the presence of magnesium, and likewise the absence of other elements would be of frightful significance if it were not a fact that the process of nature assure us that the elements present or applied will somehow get into the plant where they belong.

"These facts raise many thought-provoking interests which can lead us to new discoveries. As long as mineral elements are available and concentrated in mines wastefulness of the present elements in the soil may seem important, but wide dissemination of the minerals is taking place now and the time is rapidly

approaching when they can be picked up in scattering amounts."

#### **Phil Alampi, President National Association of Radio Farm Directors:**

Mr. Alampi asserted there are "many pamphlets, books and articles on organic gardening" and "within these publications there is a hodge-podge of truths, half-truths, propaganda and to be charitable, complete disregard of known facts."

"We are indebted to the organic gardeners for helping emphasize to the public the importance of organic matter in the soil," he said, but stated "on the other hand encouraging people to believe that their own diseases can be cured by growing foods on organically fertilized soils as against using chemical fertilizers or encouraging people to refrain from using a sensible means of insect and disease control, is a distinct disservice. Further, it must be realized that apart from the small garden where refuse can be saved and brought in, the compost pile is wholly inadequate to maintain economically the organic matter in the soil.

"Over the wide area of the earth's surface where food is produced in quantity there is no possibility of accumulating enough plant refuse to compost in piles and thus increase the organic matter in the soil," he said. "In many countries that have been agricultural for many generations, the soil is great-

ly depleted in organic matter. The most economical and effective way at the present time of immediately increasing crop yields and also increasing organic matter is to use chemical fertilizers which, on these impoverished soils will show immediate results." He emphasized that farmers, through their experiment stations, other educational agencies and fertilizer companies, "know and appreciate the importance of organic matter and the use of chemical fertilizers."

#### **Edwin Bay, President, National Association County Agricultural Agents:**

"It would take an additional 50,000,000 more acres of productive land to maintain present (agricultural) production without the use of fertilizers and we know these acres are not available. The rapidly increased use of various types of fertilizers and plant foods has been a major factor in making it possible for American farmers to increase total agricultural production by about 40 percent, as compared to 20 years ago. It has been estimated that as of 1945, the use of fertilizers was directly responsible for at least 20% of our farm production. This is undoubtedly a conservative figure at the present time, since there has been a tremendous increase in the use of all types of fertilizers since 1945. Taking these facts into consideration, it is indicated that without the use of fertilizers it would be impossible to produce the amounts of foods and fibres now being consumed and used in the domestic economy and foreign trade.

"The increased production on American farms has served to increase the efficiency of the average farm operation, thus reducing the unit cost of production. Not only has it made it possible for America to be the best fed and the best clothed nation in the world, but it has also made it possible for farmers to make additional profits because of the increase in the efficiency of their production, and with the profits from their productive efforts they have been able to im-

### **KEY TO APFC CONVENTION PICTURES**

1. Members of the Ladies' Committee of the Council (left to right) with Mrs. Paul T. Truitt (fourth from left), wife of the Council President.; Mrs. L. Dudley George, II, Richmond, Va.; Mrs. G. Albert Woods of Raleigh, N. C.; Mrs. Horace M. Albright, of New York City; Mrs. Harry B. Caldwell of Greensboro, N. C. and Mrs. Jeff D. Stewart, Jr., of Louisville, Ky., Chairman of the Committee. 2. United States Senator Karl E. Mundt, (R-S.D.). 3. W. B. Copeland, Smith-Douglass Company, Streator, Ill. 4. Fred J. Woods, Gulf Fertilizer Company, Tampa, Fla.; Paul T. Truitt, Council President. 4. Edwin Bay, president of the National Association County Agricultural Agents, Phil Alampi, president of the National Association of Radio Farm Directors and Paul Sanders, editor of The Southern Planter, John Hall, Potash Company of America, Washington, D. C. 5. G. Maynard Jenkins, Spencer Chemical Company, Washington, D. C.; Congressman W. R. Poage (D-Tex.); Joe Parker, former General Counsel for the House Agriculture Committee and John J. Heimburger, who succeeded Mr. Parker as General Counsel of the House Committee. 6. Ferdie Deering, President American Agricultural Editors' Association. 7. Secretary of Agriculture Charles F. Brannan. 8. Paul Sanders, Congressman Tom Abernethy, (D-M.) chairman of the House Committee on Agriculture and Forestry. 9. Mrs. J. A. Howell of Richmond, Va.; Mrs. John A. Collis of Louisville, Ky. and Mr. Howell, president of Virginia-Carolina Chemical Corporation and former chairman of the Executive Committee of the Council. 10. Mrs. R. F. Hopkins and Mr. Hopkins, San Jacinto Chemical Corporation, Houston, Tex.; Mrs. Harold Dinges and Mr. Dinges, Spencer Chemical Company, Kansas City, Mo. 11. Frank S. Washburn, American Cyanamid Co., NYC. Paul D. Sanders.

—APFC Photos



### IMPORTANT ANGLE ON FARM PROFITS

Maybe no modern farmer would go so far as to call his job a picnic. But it would have seemed so to the old-time farmer who lacked modern means of maintaining and increasing soil fertility. Without protection against the hazards of weather and blight, he worked much harder . . . and he often worked in vain.

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prove their standards of living, and have also been able to improve their home communities. In addition, they have been able to increase their purchases of the goods and services of industry and labor, and thereby there has been an indirect beneficial effect upon the entire economy."

**Robert A. Wall, Vice President,  
National Vocational Agricultural  
Teachers' Association:**

"When our Government tells us that an increase of four to five per cent in corn production is necessary to supply our Nation's demand, it is not necessary to prepare that much additional corn ground because this increase in yield can easily be brought about by increasing the amount of fertilizer of the proper analysis."

"I recall that in the early thirties when I started teaching, a 35 to 40

bushel corn crop was all that a farmer expected if the season was good," he said. "Today, that same farmer or his sons are producing 75 to 80 bushels of corn on the same land, and in many cases are exceeding 100 bushels per acre. This change in yield has been brought about mainly by heavier applications of fertilizer, and the use of hybrid seed."

Mr. Wall emphasized the importance of fertilizers in grassland farming. "Here in the Shenandoah Valley where I have taught Vocational Agriculture for more than twenty years," he said, "the livestock farmers are fast turning to grass farming. There are several reasons for this change: the high cost and scarcity of farm labor; the threat of the corn borer; the control of soil erosion, but chiefly, I believe the change is due to the realization that grasses and legumes represent the cheapest of all feeds."

"Some of our beef animal farmers are changing their farming programs whereby pasture and hay is all the feed given the cow herds. By the proper use of fertilizers they are able to bring their pastures into such a high state of growth that they will afford year around grazing. Very little hay is used except during extremely cold weather, and the few days that the pasture may be covered with snow."

"I have in mind one farmer who is installing a hay drying system whereby chopped grasses, green or slightly wilted are hauled directly from the field, blown into the self-feeding system, and the curing process completed by the dryer. This farmer is not only guarding against scarce farm labor, but is producing beef in a profitable manner. We are aware of the fact that this system of farming can only be practiced profitably by liberal use of fertilizer and lime."

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## KEY TO PICTURES

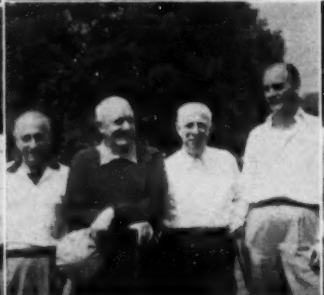
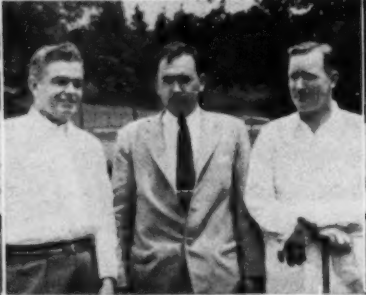
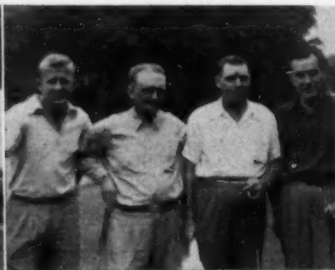
1. W. T. Wright, F. S. Royster Guano Co., Norfolk, John Doetsch, Chilean Nitrate Sales Corp., New York, John V. Collis, Federal Chemical Co., Louisville, 2. C. M. Campbell, Union Bag & Paper Co., Baltimore, B. D. Barber, and F. D. Coffee, both of Wilson & Toomer Fertilizer Co., Jacksonville, S. K. Bradley, Union Bag & Paper Co., New York, 3. Sid Rydell, Swift & Co., Chicago, R. H. Linderman, International Minerals & Chemical Corp., Chicago, E. H. Luddington, Jr., Chase Bag Co., New York, J. D. Stewart, Jr., Federal Chemical Co., Louisville, 4. Fred Byran, Chilean Nitrate Sales Corp., Raleigh, Charlie Harding, Virginia-Carolina Chemical Corp., Richmond, M. W. Darden, Smith-Douglass Co., Norfolk, J. M. Rawlings, F. S. Royster Guano Co., Montgomery, 5. Sid Keel, International Minerals & Chemical Corp., Atlanta, Al Woods, Potash Company of America, Raleigh, John Sanford, Armour Fertilizer Works, Atlanta, 6. Ed Phillips, G.L.F. Soil Building Service, New York, Roy LaMarche, International Paper Company, New York, Bob Lenhart, G.L.F. Soil Building Service, New York, Ed Scott, International Paper Co., New York, 7. Cecil Arledge, Virginia-Carolina Chemical Corp., Richmond, Bill Johnson, Smith-Rowland, Norfolk, 8. Ed Scott, International Paper Co., New York, Roy LaMarche, International Paper Co., New York, Kenneth MacAleenan, Thos. Childs, American Metal Co., Ltd., New York, 9. Mrs. Burton Ford, Allentown, Mr. & Mrs. John Perryman, R. D. Cole Mfg. Co., Newnan.

## U. S. Senator Karl E. Mundt of South Dakota:

Senator Mundt asserted that "only in free enterprise America where private initiative and venture capital is still rewarded do we retain the capacity to equip the armies and to finance the exchequers of those who would be free," adding that "in spite of this glorious American record and the sturdy functioning of our American success formula, there are some in Washington who would have you believe that only the genius of the all powerful State and the always-ambitious politician can guide us through our present difficulties and provide us with the sinews of war and the strength to compel peace. Most of the world's difficulties today stem from the fact that too few men have exercised too much power over too many people for too long a time. We are beginning to suffer from the ravages of that same malady right here at

home. The ceaseless crusade of the professional politician to play the role of Mr. Fixit in the solution of every problem of every country in the World has its volunteers here as it has under every foreign flag. However, the unflinching record of history fails to disclose a single political or economic formula ever attempted in any country in any era of history that even remotely approximates the dividends flowing from the success formula of our American free way of life."

Senator Mundt warned against "substituting the European concept of security— dependency upon the Government — for our American concept, and said, "There is nothing basically wrong with the American success formula except a lack of faith and confidence on the part of those who would scrap it, or scuttle it, or straight-jacket is so that it can no longer function successfully."



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Left to right, bottom row: Paul T. Truitt, president of the Council; Secretary of Agriculture, Charles F. Brannan; Dr. Paul D. Sanders, editor of THE SOUTHERN PLANTER, Richmond, Va. and Ferdie Deering, president of the American Agricultural Editor's Association and editor of THE FARMER-STOCKMAN, Oklahoma City. Top row (left to right): Robert A. Wall, vice-president, National Vocational Agricultural Teachers' Association, Luray, Va.; Edwin Bay, president, National Association County Agricultural Agents, Springfield, Ill.; Dr. H. Frank Poole, president, Association of Land-Grant Colleges and Universities and president of Clemson Agricultural College, Clemson, S. C. and Phil Alampi, president National Association of Radio Farm Directors and Program Director of Station WJZ, New York City.

—APFC Photo.

### New APFC Board Members

Eight new members were elected to the Board of Directors of the American Plant Food Council at the Sixth Annual Convention for terms expiring June 30, 1954 as follows:

C. B. Clay, Cotton States, Fertilizer Company, Macon, Ga.; J. C. Crissey, G.L.F. Soil Building Service, Ithaca, N. Y.; Wallace B. Hicks, Wilson & Toomer, Jacksonville, Fla.; R. R. Hull, I. P. Thomas & Son Company, Camden, N. J.; Kenneth D. Morrison, Naco Fertilizer Company, Charleston, S. C.; John R. Riley, Jr., Spencer Chemical Company, Kansas City, Mo.; J. A. Roberts, Pioneer Phosphate Company, Des Moines, Iowa; M. W. Whipple, Olds & Whipple, Inc., Hartford, Conn.

Paul Prosser of The Baugh & Sons Company, Baltimore, Md., was elected to fill the unexpired term of W. S. Rupp, retired executive of the same firm, expiring June 30, 1952.

Members of the Executive Committee of the Council, elected at the

Sixth Annual Convention, are as follows:

George E. Pettit, Potash Company of America, Washington, D. C.; C. Cecil Arledge, Virginia - Carolina Chemical Corp., Richmond, Va.; John V. Collis, Federal Chemical Company, Louisville, Ky.; C. B. Robertson, Robertson Chemical Corp., Norfolk, Va.; John E. Sanford, Armour Fertilizer Works, Atlanta, Ga.; W. T. Wright (ex officio member) F. S. Royster Guano Company, Norfolk, Va.

### APFC Golf Prizes

Low Net (1) W. B. Porterfield, U. S. Potash Company, Richmond, Virginia; (2) F. P. Bryan, Chilean Nitrate Sales Corp., Raleigh, N. C.; (3) John B. Sanford, Armour Fertilizer Works, Atlanta, Ga.; Low Gross (1) Geo. D. Morgan, Jr., Co-operative Fertilizer Service, Richmond, Va.; (2) John R. Rice, Liberty Limestone Corp., Buchanan, Va.; (3) Tom Morgan, Agricultural Chemicals, New York City. Kickers (1) Omar Sanders, Jr., American Metal Co., Ltd., New York City; (2) Harold Dinges, Spencer Chemical Company,

Kansas City Mo.; Veterans (1) B. D. Barber, Wilson & Toomer Fertilizer Co., Jacksonville, Fla.; (2) E. W. Harvey, The Barrett Division, Norfolk, Va. Nearest Pin (1) Tom Jones, Arkell & Smiths, Columbus, Ohio; (2) Dr. James A. Naftel, Pacific Coast Borax Co., Auburn, Ala. Low Net (1) T. W. Childs, American Metal Co., Ltd., New York City; (2) W. W. Venable, Liberty Limestone Corp., Buchanan, Va. Low Net (3) R. B. Lenhart, G.L.F. Soil Building Service, New York City; Low Gross (1) E. King Ludington, Chase Bag Company, New York City; (2) C. M. Campbell, Union Bag & Paper Company, Baltimore, Md.; (3) W. T. Steele, Jr., Co-operative Fertilizer Service, Richmond, Va.; Kickers (1) Wm. C. Stark, Atlantic Fertilizer Corporation, Riverhead, L. I., New York; (2) R. R. Hull, I. P. Thomas & Son, Camden, N. J.; Veterans (1) O. E. Zacharias, Co-operative Fertilizer Service, Richmond, Va.; (2) T. Hudson, Weirton Steel, Weirton, W. Va.; Nearest Pin (1) A. Nelson Myers, Texas Gulf Sulphur Company, New York City; (2) C. J. Ball, Phillips Chemical Company, Norfolk, Va.; Low Net (1) John V. Collis, Federal Chemical Company, Louisville, Ky.; (2) D. Harold Johnson, Virginia-Carolina Chemical Company, Richmond, Va.; (3) Roy LaMarche, International Paper Company, New York City.

### APFC Tennis Prizes

#### Men's Singles

Winner—A. J. Dickinson, Virginia-Carolina Chemical Corp., Richmond, Va.

Runner-up—Dean Gidney, U. S. Potash Company, New York City.

#### Ladies' Singles

Winner—Mrs. John A. Roberts, Des Moines, Iowa.

Runner-up—Mrs. E. K. Ludington, New York City.

#### Men's Doubles

Winners—A. J. Dickinson, Virginia-Carolina Chemical Corp., Richmond, Va.; E. C. Horne, Bradley & Baker, St. Louis, Mo.

Runners-up—Dean Gidney, U. S. Potash Company, New York City; George H. Burns.

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Winners—Mrs. John A. Roberts, Des Moines, Iowa; L. L. Jaquier, Phillips Chemical Co., Maple City, Mich.

Runners-up—Mrs. E. K. Ludington, New York City; George H. Burns.

#### International Stockholders

##### **Vote on Innis, Speiden Purchase**

A special meeting of stockholders of International Minerals & Chemical Corporation was to be held in New York June 27 to consider three proposals, including the acquisition of Innis, Speiden & Co., a potash chemical company, according to Louis Ware, president.

Innis, Speiden & Co., which was founded in 1816, is one of the oldest potash chemical companies in the United States. Its business primarily consists of the manufacture, refining and processing of caustic potash, carbonated potash, chlorine and chlorinated minerals and chemicals, and industrial waxes and gums. It operates a manufacturing plant at Niagara Falls, N. Y., a re-

fining and processing plant in Jersey City, N. J., and a warehouse in Chicago, Ill. F. Eberstadt & Co. acted as financial advisors to Innis, Speiden & Co.

"Potassium chemicals are important industrial chemicals, manufactured from muriate of potash, which is one of the principal products of International Minerals & Chemical Corporation. The business of Innis, Speiden & Co., therefore, forms a natural basis for the further expansion of International in the chemical field and will implement the operations of its Potash Division," Mr. Ware said.

#### **Bemis Gets Certificate From ECA**

As a result of its aid in training two Dutch textile engineers in the techniques of American textile production methods, the Bemis Bro. Bag Co. has been awarded a Certificate of Cooperation by the Economic Cooperation Administration "for furnishing assistance to the peoples of the Marshall Plan countries to aid them in maintaining individual liberty, free institutions, and peace."

## OBITUARIES

**Charles Nathan Becker**, 55, since 1946 with R. H. Clark Equipment Co., Mulberry, Florida, and formerly for 23 years with Southern Phosphate at Bartow, Florida, died May 21 at Bartow. He had been in poor health for several months.

**Herman E. Hirt**, president of Carolina Chemical, Jacksonville, Florida, died June 2 after a few weeks' illness.

**Herbert A. Lynch**, 64, vice-president and secretary of Acme Fertilizer Company, Wilmington, North Carolina, died there May 30 after a short illness.

**Dr. H. P. Stuckey**, 71, for 30 years director of the Georgia Experiment Station and only in 1948 made director emeritus, died suddenly at the Mountain Experiment Station, Blairsville, Georgia, June 14.

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# *The Plant Food Industry and National Defense*

Talk by Secretary of Agriculture CHARLES F. BRANNAN at convention of American Plant Food Council, Hot Springs, Virginia, June 16, 1951.

I welcome this opportunity to talk with you about the plant food industry and its role in the national defense effort.

We in the Department of Agriculture know that you folks of the plant food industry have a sound appreciation of the important contribution you can make—in fact, are making—to American agriculture and the Nation's food supply. But we want to pass on our view as to how vitally important we believe your efforts to be in this emergency period.

In our view, the dramatic, world-shaking events of the last year have speeded American agriculture into a new phase of development—a period of profound importance to the success of the Nation's defense effort. It is a period that will find the plant food industry playing its greatest role in history.

As you know, the threatening international situation and our mobilization program have created a new and sudden demand for greatly increased quantities of agricultural commodities.

But this new demand has come at a time when American agriculture already is producing at a very high level. It has come at a time when American agriculture is maintaining in production just about every acre of

the farm lands now available to crop production.

This situation means that American agriculture cannot look to new land and expand farm acreages to satisfy the Nation's immediate growing needs for food and fiber. It means that agriculture must concentrate largely on making existing acreages produce more abundantly.

It follows then that we must work harder than ever for wider adaptation of better farming practices and techniques. And it is in this connection that we must depend as never before on the output of your industry. For the application of increased quantities of fertilizer is the farming practice which provides one of the biggest opportunities for quickly increasing all agricultural production in behalf of the defense effort.

We have, in effect, just crossed the threshold of a "fertilizer era" in American agriculture. It is an era that brings with it a number of very special problems. Foremost among them is the problem of achieving increased production of fertilizer to meet agriculture's pressing needs. I want to take this opportunity to report to you, as fully as I can at this time, the thinking and actions of the Department of Agriculture with respect to that problem.

First, however, I want to tell you that I believe the American Plant Food Council is fortunate in entering the "fertilizer era" under the exceptionally able leadership of Paul Truitt. I'm sure that he will carry on the notable service of your first president, Clifton Woodrum, in creating a better public understanding of the fertilizer industry and its contribution to agriculture and the national economy as a whole.

I am glad that you leaders in the plant food business are devoting a great deal of thought to agriculture and its role in the mobilization program. I know you take sincere pride in the fact that your product and your effort contribute materially to the Nation's food supply and will help to develop a permanent and profitable American agriculture.

I am confident that you share my interest in studying the present fertilizer needs of agriculture and in working for the necessary increase in fertilizer production to meet those needs.

I want now to give you a brief general picture of the challenge facing agriculture in filling its role in the mobilization program. Then I will tell you what the Department of Agriculture is doing, in a general way, to help agriculture fill that role.

Agriculture faces the challenge of producing enough to supply the Nation's growing military forces with food and the growing defense industries with raw materials.

It must produce enough to supply the 150 million people who make up the Nation's civilian population, and enough

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more to carry at the same time a safe margin in strategic reserves.

On top of all this agriculture must produce enough to back up the Nation's foreign policy by continuing to share our abundance to the fullest possible extent under sound arrangements with friendly allied countries in need of help.

The 1951 production guides for agriculture call for the greatest total volume in history—43 percent more than the 1935-39 average—four percent more than last year. The biggest increases are needed in cotton, corn, wheat and rice with substantial increases also in truck crops.

The production guides place the heaviest emphasis on feed crops, especially corn. And they

urge all possible improvement of yields in grass and hay crops in order to meet the increasing demands for livestock products.

Agriculture must meet this challenge in the face of limited land resources and limited labor resources. The basic problem, of course, is that of getting greater output per unit of land and labor resources.

Let me review with you the policies the Department of Agriculture is following to achieve this end.

First, we are helping farmers organize their effort according to a carefully balanced production pattern which makes the most effective use of our agricultural resources and is closely geared to civilian and military requirements.

Second, we are working for

more widespread adoption of better farming practices which increase production.

Third, we are insisting as forcefully as possible that adequate machinery, fertilizers, and insecticides—the farmers' tools of production—be kept available.

Fourth, we are working to help agriculture retain sufficient skilled manpower on its farms.

And fifth, we are working to provide reasonable price assurances to agriculture so that farmers can go ahead with the business of expanding production with some assurance that their markets later will not come crashing down about them.

Those are the policies which guide the Department's overall program at the present time.



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Fertilizer, of course, is one of the most vital factors for success of this program. It is the one tool of production—if I may call it that—on which we can depend for increasing production of all kinds of crops on most soils.

The Department has made an appraisal of the situation to determine just how much of an increase in fertilizer production we will need to fill the Nation's agricultural requirements. This has been made not only on the basis of what we hope will be the short-term needs of the present emergency period but also on the basis of long-range expectations for normal growth in the use of fertilizer.

It is a very interesting appraisal. It reveals, of course, that in view of the increased demand for agricultural commodities, a serious shortage of fertilizer is developing. This shortage is best illustrated in

terms of the meat situation.

As you know, meat is one of the most sensitive commodities in the food picture today. It is generally agreed that civilian morale and the success of anti-inflation measures rest heavily on the ability of our ranchers, farmers, and feeders to increase meat production. But there are difficulties in this situation which tie in very closely with your business of manufacturing and distributing fertilizer.

Livestock production already has grown to the point where it has out-distanced the Nation's current rate of feed production. As a result, the Nation is digging into its feed reserves to maintain present meat production. Meanwhile people are clamoring for an even greater meat supply.

Consumption of meat this year is expected to be about 146 to 147 pounds per capita. But it would be several pounds less

than that if it had to depend on this year's expected feed production.

It appears as if we will have to draw upon our grain reserves again next year if we are to maintain the current rate of meat consumption. This could be prevented only if feed crops this year turn out to be larger than those indicated by farmers' planting intentions on March 1.

Thus we find meat production and the demand for meat climbing upward with feed production already behind, with our feed reserves being reduced, and with few additional acres immediately available for increasing feed production.

At average yields we would need several million acres more land to balance feed production against the demand for meat. Needless to say there is no hope of immediately solving the problem in that way.

It is a relief to be able to turn



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to a promising alternative—the alternative of fertilizer. We know that one ton of nitrogen fertilizer used in combination with other improved practices gives an average increase in crop yields equal to the production of eight to 15 additional acres of good farm land. And we know that we are not using nearly as much nitrogen as could be applied to increase crop yields.

We believe that if agriculture is going to meet the emergency needs of the defense program, it will require an additional 500 thousand tons of nitrogen fertilizer.

Of course, we know that nitrogen must be balanced with phosphates and potash. But we know that the greatest potential for increased crop production lies in fertilizer practices which lean more heavily on nitrogen.

Whereas the average fertilized ratio in the past has been of the 1-3-1 type—one part nitrogen, three parts phosphorus, and one part potash—ratios now are moving in the direction of equal parts of all three ingredients. Our soils experts tell us, however, that for the best utilization of fertilizer materials and the biggest return from their ap-

plication, we should in many areas be using a 2-1-1 ratio—that is, two parts of nitrogen for each part of the other components.

We know that we can increase nitrogen production without great difficulty. Nitrogen resources in the atmosphere are virtually limitless. All we need is greater production capacity.

Although phosphates are in tight supply, we know that we can make more effective and economical use of present production. The phosphate situation, as you know, hinges at present on the availability of sulfuric acid to break down the phosphate rock. For this reason we are starting a sulfur-phosphate conservation program. The plan is to draft a program of suggestions and recommendations on how to stretch our limited sulfur and phosphate supplies. It will involve a survey of present uses and an examination of possible substitute materials as well as recommendations on how to use the supplies we have to the best advantage.

There is a great need for increased use of phosphates and potash on many of our soils, especially those devoted to hay and pasture crops. Farmers often de-

vote their poorest land to those crops, with the result that the Nation's grasslands, of all our croplands, present the greatest potential for increasing production and improving soil resources.

Proper fertilization of our grasslands not only brings greatly increased yields of forage crops, but enriches the nutritive value of the crops as well. This is another way in which fertilizer contributes toward building a more adequate meat supply for the Nation.

Thus we find that while little additional cropland is available to satisfy the Nation's emergency food and fiber needs, the desired result can be obtained through increased production and use of fertilizer—especially nitrogen.

I know that this situation—this dependence of American agriculture on increased supplies of fertilizer—comes as a surprise to most people and even to most farmers. A quick look at what has happened during the past 20 years, however, will help to clear up the picture.

Although the total acreage of cropland was not increased significantly during the past 30 years, farmers found several

ways of increasing production to keep pace with our growing population. Mainly this was done through mechanization, improved crop varieties, better pest control, fertilization and improved cultural practices.

For example, agriculture substituted tractors for 20 of the 26 million horses and mules on farms. This increased production efficiency and released about 65 million acres of land for the support of additional meat and milk animals. Changing to hybrid corn increased yields about 20 percent, and this change has been made on 70 million of the 85 million acres on which we grow corn in this country. Increasing soybean production from four million to 287 million bushels, provided a much better balanced diet for livestock.

Farmers more than tripled the use of fertilizer in this 30-year period and introduced other improved practices.

These improvements still have unexpended power for further expanding production. But the present trend of increase is not enough to meet urgent emergency needs. We must speed up our rate of increases. Therefore we are looking on fertilizers as the key for accelerating immediate production and improving

soils for sustained production at high levels.

I should point out that meat and feed grains are not the only big production problem facing agriculture. Let's take a look at the cotton situation.

Cotton is a very important basic commodity used in producing implements for defense. It is used in smokeless powder, plastics, films, parachutes, and balloons as well as in clothing soldiers.

A year ago we had one-third of a good year's cotton crop in reserve. But we now have used up the entire reserve and are trying earnestly to increase production. We are doing this by increasing cotton acreage and taking acres away from other crops. This is one of the factors in our short supply of feed grains.

Actually it would seem as if there were no limit to the amount of additional fertilizer we could use in easing our agricultural problems. This is especially true when you consider that it might become necessary for our munitions plants to step in and take a large share of production, leaving agriculture in a worse position than before.

However, we know there are

practical limits as to the amount of increase in fertilizer production we can expect in the next year or two. For one thing, it takes steel to construct fertilizer plants and steel is a critical defense material.

Taking all factors into consideration, we in the Department have settled on a "minimum, essential program" involving fertilizer which we believe will have the support of the plant food industry.

First, we are working to assist private industry to increase nitrogen fertilizer production by 500 thousand tons. Present production, I understand, is about one million, 250 thousand tons a year. The increase, amounting to 40 percent, would raise the total to one million, 750 thousand tons.

Such an increase in nitrogen fertilizer production, we believe, would enable American agriculture to satisfy current demands for food and fiber without drawing on necessary reserves. The increase is particularly important in view of the fact that any step-up in the production of munitions would take nitrogen away from agriculture.

We believe that this method

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of assuring needed farm production would not be a major industrial effort. The requirements for building an additional 500 thousand tons of nitrogen capacity is only about 100 thousand tons of steel, or about one-thousandth of our annual steel production.

We hope and believe that private industry including farm cooperatives will be able to provide this needed increase in production. The Government is providing tax amortizations and loans under the Defense Production Act to help private industry finance new plant capacity. And it is giving priorities assistance to help private industry obtain controlled materials with which to construct this new capacity.

It is conceivable that in an extreme emergency, additional plant capacity could be built by the Government as was done in World War II. You will recall that the Government built ten nitrogen fixation plants at that time and sold eight of them to private industry at less than cost after the war. It is my understanding that those plants are producing about half of the total nitrogen output at this time. However, it goes without saying that the Government prefers that private industry carry the ball. The Department will give what help it can to private industry in getting the job done.

One of our major efforts is to get back into production the Army's nitrogen plant at Morgantown, West Virginia. This is one of the two plants retained by the Army following World War II. The other plant is being

used in connection with research on liquid fuels.

The Morgantown plant could give us an additional 200 thousand tons per year as soon as it is put in operation. Another plant of 35 thousand tons capacity in Mississippi might also be brought into operation without much difficulty. The production of these plants probably would be about as close as we could expect to get to the 500 thousand tons needed for 1952.

The second part of our program is to work for additional production of nitrogen fertilizer amounting to 100 thousand tons each year, following the increase of 500 thousand tons. This extra production to be added each year is necessary to meet the increasing demands of our growing population. We are growing at the rate of a little more than two million persons a year, or about six thousand every day. These new people also must be included in our calculations.

These objectives for increasing nitrogen production are largely short-range objectives. But I want to stress the fact that they are compatible with the long-range needs of agriculture for increased fertilizer supplies.

If you were to take the rate of increase in fertilizer consumption during the past 50 years and project it into the future you would find that the need for nitrogen in 1960 would be about double that of today. This fact and others indicate that the short-range objectives for increasing nitrogen production are not likely to result in future oversupply. To the contrary, the very limitations now

facing agriculture would indicate that the business of producing nitrogen will be a booming one for years to come.

By 1953, we should remember, there will be an additional four million people in our midst. So that by that date there will be a need for a total of 700 thousand tons additional nitrogen capacity.

I already have mentioned the third part of our program, which is to work for more efficient and more economical use of sulfur and phosphates.

We also are working with research people and several American chemical companies on the possibility of substituting nitric acid for sulfuric acid in the treatment of phosphate rock.

We are encouraging the production of higher analysis fertilizer materials to reduce handling and transportation charges.

Equally important, we are working for wider adaptation of better farming practices and techniques with respect to fertilizer which will do most to increase production.

We are giving special attention to our grasslands program, encouraging the use of fertilizer in building more productive hay and pasture lands. For as I have pointed out, grasslands present the greatest potential for increasing production of all our croplands.

Those are the highlights of our fertilizer program. They outline the major actions we are taking to bring about the needed increase in fertilizer production.

As I mentioned earlier, how-

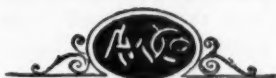
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ever, the Department's overall program for helping agriculture fill its role in the mobilization program is a broad one. I pointed out that it involves organizing agricultural production for defense needs and working for better farming methods, adequate materials and facilities, sufficient manpower, and reasonable price assurance. I can assure you that the Department will carry out its responsibilities aggressively, and yet in a spirit of full cooperation with other agencies and with industry.

Meanwhile it is my hope that the splendid cooperation which has existed between the plant food industry and the Department of Agriculture will continue to serve the Nation in this time of emergency.

I believe that the cooperation we have enjoyed in recent years can be used as a good example of how progress made through cooperation of the Government and private enterprise has creat-

ed a dynamic trend in agriculture on which the Nation will capitalize for years to come.

There can be no doubt that the health and wealth of our Nation has been aided materially by your industry in the past. There can be no doubt that your industry will contribute heavily to the security of our Nation in the critical years ahead.

### **COLEMAN**

(Continued from page 24)

has not been appreciated. Our industry's essentiality for the future must be realized, first by our own leaders, then by agriculture which uses our products directly, and finally by all peoples who benefit from fertilizer usage. It is especially important that those who shape our foreign policy and our economy at home know the significance of food and our industry's importance in the production of it. They must not forget that politics is but an expression of more deeply seated causes.

To relate our own industry to our foreign policy is interesting and important for it is necessary to look ahead if we are to meet our industry's global responsibility. For us today it might be more important, however, to focus our attention specifically on some of the immediate problems at home—problems which must be solved if we are to maintain world leadership in our field. Let's first be sure that the Iron Curtain does not envelop our own industry here.

For the present one of our greatest problems is to convince our own government leadership, particularly those who are in charge of our defense program, that commercial fertilizers are not only essential but are indispensable to our nation's welfare. Those in authority must know that fertilizer is as essential to food as steel is to shells and that it deserves equal consideration in obtaining critical materials. Your trade association is striving to accomplish this objective and

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at the same time keep itself abreast of and its members informed on current developments in government.

In addition to our present problems, NFA has been looking toward the future trying to calculate to the best of its ability the changes which may occur in order that our industry might make maximum progress with the most force and the least impact. Future problems are too many to enumerate, but to mention only two:

1. The shortage of sulfur and the possibility of sulfuric acid either continuing in short supply or becoming considerably more expensive, in which case other acids might be economical to use in acidulating phosphate rock, or other processes used to

produce available phosphates.

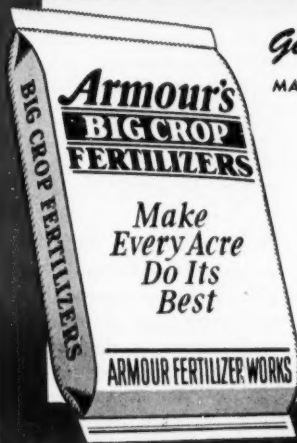
2. The long-time effect of Atomic Energy Commission's interest in extracting uranium from phosphate rock, a process which could furnish considerably increased quantities of liquid phosphoric acid which could be used to make triple superphosphate or to increase the present grade of normal superphosphate and thus speed up the present trend toward higher analysis fertilizers.

The possible effect of these and other technical problems should first be studied from a research standpoint. Our Association through its executive and technical leaders is making an effort to bring to bear all of the available facilities which can contribute to a solution of these

problems. Our industry's laboratories today are working on many of these projects. There are gaps, however, which are being studied and should be accentuated in government laboratories. With this in mind, a committee from our Board of Directors has met with the TVA Board and considered a cooperative project whereby the research laboratory at Muscle Shoals might be encouraged to study more of our industry problems. In addition, we hope to strengthen the excellent cooperation which we have enjoyed throughout the years with the U. S. Department of Agriculture and other government agencies.

Our Association is increasing its facilities to offer more tech-

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nical services to its members. By looking ahead perhaps we can avoid some of the pitfalls which lie in our course. For to meet our national and international responsibility we must keep abreast of the times.

I have tried to point out that our fertilizer industry and your trade association have a part in world peace. In looking beyond the Iron Curtain our industry not only will be affected by our foreign policy, but it will have an important role in shaping our foreign policy and in determining how long the Iron Curtain will exist.

In establishing our policy at home and abroad there are numerous factors which must be considered, but to those in authority I should like to emphasize my theme: Food is essential

to freedom. And, since fertilizer is necessary in food production, the commercial fertilizer industry represents an important building stone in the freedom of all nations.

Given an opportunity, our industry will measure up to this trust.

## TOTMAN

(Continued from page 28)

standing MRO orders bearing priority DO-97, with the result that such items, many of them being of importance to the fertilizer industry, had to be purchased thereafter in the open market. It is now contemplated that under the Controlled Materials Plan a regulation will be issued, to become effective on July 1, which will make provision for MRO priorities.

In the early days of the emergency, agriculture was apparently ignored insofar as direct recognition of its needs as compared with the needs of steel, rubber and petroleum industries was concerned. Following urgent protests, agricultural representatives have been appointed as advisors to the administrators of the emergency defense agencies. In addition, four agricultural representatives have been appointed to serve on the President's National Advisory Board on Mobilization Policy.

## Price Controls

To combat rising and inflationary prices the Office of Price Stabilization, on January 26, issued its comprehensive General Ceiling Price Regulation. It included in its terms manufacturers, wholesalers and retailers



and the widest possible range of commodities, including fertilizers. It was admittedly a "stop-gap" order, intended to freeze prices at the December 19-January 25 level pending the issuance of regulations for individual commodities and different levels of distribution.

On April 25, Ceiling Price Regulation No. 22, effective May 28, was issued. This effective date was later extended to July 2. This regulation applies to sales of manufactured goods by the manufacturers thereof, except sales at retail and sales of certain specifically exempted commodities. During the first month of this regulation our Association was repeatedly advised by OPS General Counsel that mixed fertilizers sold by manufacturers to consumers through agents were not affected by the order. Later they rescinded this decision and advised that the sale of mixed fertilizers to farmers must comply with the provisions of this order. It is believed that a ceiling price regulation tailored specifically for fertilizers may be in effect before the 1952 season.

Nonmetallic minerals such as sulfur are specifically exempted from the regulation. However, it may be that the exemption applies only to the ores and not to "commodities produced or processed in whole or in part" from such ores. The OPS has currently ruled that phosphate rock and potash are in this class and are not covered by the order. However, it is assumed that this interpretation is still subject to change.

Another price regulation of interest to our industry is CPR-34 which, among other things,

provides that a commission agent may apply to currently authorized prices the highest percentage commission rate that he charged on similar transactions during the base period.

#### **Rail Freight Rates**

Early this year the Interstate Commerce Commission was petitioned to authorize a general 6 percent increase in rail freight rates. Interim increases of 4 percent in some areas and 2 percent in others were authorized by the Commission pending a hearing. These increases had hardly become effective when the railroads requested authorization for additional increases to 15 percent, this to include the interim increases granted on April 4. Such increases make substantial additions to the cost of fertilizer, and the Association in pursuance of its customary policy, is vigorously opposing them.

#### **Continuation of Educational Work**

The Association has kept in view its long-term objective of educational work — the acquiring and dissemination of sound information as to the what, the where, and the how of fertilizer use as the surest way to build an industry that will be successful from its own standpoint and from that of the public it serves. Three events stand out as parts of the continued and continuous development of that program during the closing year.

The classic, **HUNGER SIGNS IN CROPS**, continued to make its appeal to thoughtful persons in agriculture and to fill a keenly felt need for an easily understandable book on plant nutrition. Already more than 50,000 copies of the recently revised

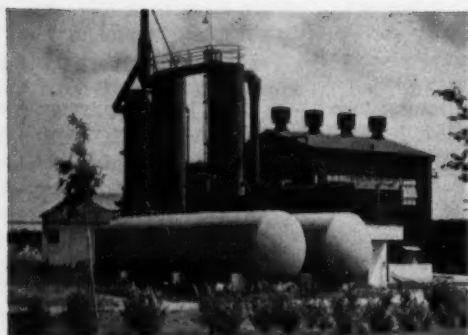
edition have been sold, and orders continue to pour in.

I am happy to report also that within days the 324-page volume, **THE PEANUT—THE UNPREDICTABLE LEGUME**, will be off the press. This well-illustrated book, prepared by experts in the field, culminates years of work sponsored by NFA's Plant Food Research Committee and marks another Association "first" through the bringing together, between two covers, the latest information on the production, harvesting and storing of peanuts.

Continuing its visual educational work, the Association produced and in April released a new film, **DEEPER ACRES**, designed to demonstrate the feasibility and wisdom of more intensive crop production on land already under cultivation as compared with bringing more land into cultivation.

#### **"Organic School" of Fertilizing**

A development of special interest to the fertilizer industry, in connection with the fulminations of the so-called "organic school" of fertilizing, took place during the current year. In 1950 a Select Committee was appointed by the House of Representatives to investigate the effect upon human health of chemicals, including fertilizers, used in the production or processing of food. This committee held hearings and heard extensive testimony. Representatives of the fertilizer industry and agricultural scientists, including representatives of experiment stations and agricultural colleges, testified regarding the use and effect of fertilizers. On January 3, 1951, the committee filed its report, in



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which it said in no uncertain terms:

"No reliable evidence was presented that the use of chemical fertilizers has had a harmful or deleterious effect on the health of man or animal."

This unequivocal statement, made by the Congressional group having as its purpose the study of the point at issue, is a tangible pillar of strength supporting what we have always known to be the truth. The Association's publication "Science vs. Witchcraft" gives the facts as presented by disinterested scientific authorities and I strongly commend it to you for use in dealing with this matter.

### Public Recognition of NFA Activities

During the year just closing the services of the Association

to its members and the public received public recognition from two sources: The American Trade Association Executives presented to the Association an "Award of Merit"; and the American Public Relations Association presented to the Association its Silver Anvil, the top award in agriculture in its Public Relations Achievement Contest. NFA appreciates these awards as disinterested appraisal of its work.

### Fertilizer Safety Program

The problem of safety in the operation of our plants is of prime importance to every member of the industry. Even beyond the considerations of ordinary humanity and our obligation to make working and living conditions the best possible for our employees, there lies an economic

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factor which demands safe working conditions. We cannot afford to permit unsafe machinery or buildings because of the loss of time and output caused by accidents.

This question of safety is an individual one as to each plant. No two are alike and each has its own hazards that should be eliminated or so reduced as to make operations as safe and fool-proof as possible. Each plant too has its own State Workmen's Compensation laws to observe, generally with State factory safety regulations, building codes and inspections.

Present-day mechanization has done away with many former serious hazards. The undermining of storage piles with subsequent cavings catching work-

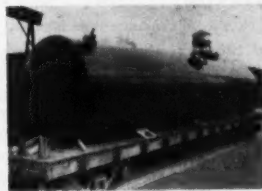


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men is a thing of the past in most plants.

We feel this matter to be so important that we plan to give place for a full discussion of it on the program for our fall meeting.

#### Outlook for the Coming Year

We are all interested in the outlook for the coming fiscal year but the picture is somewhat confused by the prospects of rapidly changing conditions and increasing government controls. It now seems apparent that there will be available some 15 percent more nitrogen and 15 percent more potash than were used during the year just closing. These estimates do not include potential increases in imports nor do they contemplate any effects of allocations or controls, or any labor or transportation difficulties. As you all know, superphosphate is our serious concern, and its supply depends entirely on sulfuric acid which, in the main, depends on sulfur. The fertilizer industry, under the present allocation order cannot expect to receive more sulfur than during 1950, with prospects for somewhat less. With inventories and stocks of both sulfur and superphosphate reduced to the minimum, there is little prospect for next year's

superphosphate supply to be more than 90 percent of last year's. Every effort is being made to recover spent acid and hitherto waste acid and to reclaim sulfur from natural gas and smelter fumes to help out the shortage. New processes for the production of available phosphoric acid are under study but it is doubtful whether they can be developed in time to be of help the coming year.

Even with this handicap our industry will be able to supply most of the farmers of our country with fertilizer, perhaps not always the exact grade and type wanted, but some substitute that will be suitable for his crop. There will be available more than 2½ times the amount of plant food consumed in the average of the pre-war years 1935-39. New plants are being built in the newer consuming areas and there is considerable expansion under way for the production of concentrated superphosphate.

As an industry we pledge that every effort will be made to the end that we shall continue to serve agriculture with its fertilizer needs so as to insure maximum production of the food, feed and fiber crops necessary to fulfill our national and international obligations.

#### Sulphur Allocation Order Issued

NPA announced June 3 that sulphur users cannot use any more of it than they did in 1950. Order M-69, which you can secure from NPA tells the whole story.

#### Arkell & Smiths Sales Meeting

Arkell & Smiths, the oldest manufacturer of paper bags in the country, held a two-day annual mid-western trade meeting, outing and sales symposium on May 15th and 16th. The trade outing was held at the Milburn Country Club on the first day. Golf in the early afternoon was followed by a cocktail party and dinner.

Company officials included S. S. Yates, President and Chairman of the Board; S. Y. Carnes, Vice President; E. E. Brown, Ass't. to the President; H. C. Peterson, Jr., General Sales Manager, who flew in from New York; and each made short informative talks to those attending. R. E. Jury, Western Sales Manager, was toastmaster at the dinner.

Guests in attendance were executives from many leading mid-western milling, food, chemical and fertilizer firms.

The second day of this annual meeting was devoted to an Arkell & Smiths sales meeting in which recent government directives, company sales policies and production figures were analyzed and discussed.

## ANDERSON

(Continued from page 29)

when they as a group face hunger and the threat of ultimate starvation. Nations, too, when they are hungry, can easily go outside the international law which seeks to maintain the peace. The primitive urge for survival spurs them into action which menaces the safety of others.

Three hundred years ago there were about one-half billion people in the whole world. Today there are two and one-third billion—an increase of almost five times. The world's population has more than doubled in the last century. In recent decades, and in spite of two world wars, the population has been increasing at the rate of about one percent each year.

So that this may not seem like another statistic, let's translate it into terms which may be clearer to us. The present rate of population increase means that every ten years more than 200 million people are ad-

ded to the world total—more people are added each decade than are now living in all of North America.

From the long range point of view, the problem of food supply in relation to population may well be the most serious question we face today. We must find the right answers, but before becoming panicky about it, we had better study all angles pretty carefully. For one thing, it would be a mistake to discount the world's potential for increased food production. Again, no useful purpose can be served by indulging in mathematical exercises which carry the present rate of population on to the point where, in a few thousand years, there literally would not be standing room left on earth.

In relatively undeveloped human societies, the birth rate and the death rate are both very high. Practically all of the people live on the land, and at little more than a subsistence level. Economic and social conditions contribute to large families. At the same time, lack of medi-

cal care and other backward conditions lead to a very high death rate. The two tend to offset each other, and you have an uneasy population balance.

As these societies begin to learn better living standards, including sanitation and control of epidemic diseases, the death rate falls. As long as the birth rate stays high, the inevitable result is a sharp upswing in population. This is what happened in Japan after its doors were first opened to the Western world. This is what is happening today in Puerto Rico.

The third and final step in this change takes place when improvement continues to the point where the areas involved become more industrialized and incorporate technical advancements in their economic and social life. The people shift into towns and cities, away from a purely pastoral and agrarian society. There is then a tendency toward lower birth rates and smaller families. More emphasis is put on quality and on providing an oppor-

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tunity for the children, The ideal of smaller families, as we know it in the more advanced western countries, takes hold. In time, low birth rates again balance out against the low death rates of these advancing societies.

When this point is reached, and the people have passed from a high birth—high death rate to a low birth—low death rate, then population trends level out and approach stability again.

In the first place we face the established fact that serious lack of food—even with our present population—is the primary cause of unrest and disturbance in many areas of the world. If we hope for sound and lasting peace, we must take steps to correct this situation. We must provide the opportunity for these people to win freedom from want, and coupled with it—consequent upon it—freedom from fear.

The next fact is that total world population is increasing steadily and rapidly, and that this trend can be expected to continue for a long time. That goes on now. It is not enough to meet food deficits for the present two and one-third billion people. We must also find ways to keep up with growing population until lower birth rates balance out lower death rates.

Finally, there is the promise that eventually there will be an end to the steady increase in population when the less developed areas make enough social and economic progress. What the total population will be before we reach that condition of relative stability is a matter of con-

jecture. Even the best informed specialists differ in their estimates, and much will depend on developments which cannot now be foreseen. However, on the basis of everything we can know at this time it seems that there will be a great many people on earth than there are today—maybe the total population will be doubled.

This, then, is the fundamental problem. To protect ourselves and others in the world against the threat of social and political upheaval, we must take steps to make more food available to the underprivileged now. And we must keep right on going in an effort to fill the stomachs of the 200 million or so people who are being added to the population every decade—until the upward population trend levels off again. And then we—or those who succeed us—must try to see that there is freedom from want—everywhere.

It's a big job, and a tremendously sobering assignment for those countries in position to supply the needed leadership. There are some who look at the way population is growing and then throw up their hands and say it can't be done. I'm not ready to quit that easily and I'm sure that this industry is not, either.

It is obvious, however, that no one country or small group of countries—no matter how productive—can meet more than a very small percentage of the food needs of the deficit areas of the world. Even if we could produce it, even if our lands could stand the continued strain on their fertility, we could

not haul it away.

I think there is a sounder course. I believe that the only one which can rally do the job is to help other people help themselves. Our know-how, our scientific knowledge of how to produce and handle food crops, must be made available to these less developed areas on a co-operative basis. Then we won't have to haul it to them.

Events have thrust the responsibility for leadership on the United States. While preparing to defend ourselves and to make aggression unprofitable for the totalitarians, our goal—the universal goal—is freedom from want everywhere. Only in plenty is there a basis for future security, for peace and freedom from fear.

## NOURSE

(Continued from page 29)

spending, and the artificial and inflationary prosperity that go with such an economic development. Repeated transfusions of paper dollars are no fit substitute for a normal life of economic nutrition and exercise.

My title says: "Inflation is fun while it lasts." If space had permitted, it should have said: Inflation, while it lasts, is fun for everyone except the widow living on her husband's savings and the housewife buying food and other family necessities. It's fun for the businessman racking up big sales and record dollar profits. It's fun for the union official who reports to his members that he got them increases of 18½ cents an hour on the "first round."

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15 cents on the second, and so on, to total, say, 65 cents an hour, or perhaps \$25 a week. It's fun for the farmer whose "parity" with industry and labor nets him a fine car—or even a private airplane—and more dollars in the bank (and dollar value on his acres) than he could have dreamed possible in the tragic Twenties.

Now it is pretty obvious in looking at this picture that we've got a bear by the tail and the problem is how to let go without getting hurt. Better still, can we use that tail as a handle to bring the bear down and knock him out? If we are going to show that we know how to make a system of free enterprise work safely and productively through even major economic strains we have to learn to practice what I have called "the gentle art of disinflation." To get our basic training in the art we need first to get a clear idea of the mechanics of inflation.

As to the state of inflation, there is now widespread understanding. Senators and Representatives, editors and radio commentators, businessmen and professors have harped away on the theme till the average citizen could say it in his sleep: More dollars in spenders' pockets than will buy goods on dealers' shelves at existing prices; so these hot dollars "bid up" the prices. Or (more realistically) smart traders, smelling out these extra dollars, mark up their prices to balance the supply of goods with the demand of dollars.

The almost limitless ability of the Federal Reserve System to absorb Federal deficits makes it possible for Senate and Congress to adopt deficits as a way of life. This is an easy "out" for them, since voters are delighted to get a "yes" answer to their requests for government largesse but insist on giving a "no" answer to suggestions that these lovely things to be paid for with taxes. But beyond this, the Government bonds that finance a deficit become central bank reserves and enable the System to create "credit currency" in volume five times as great to finance ordinary market operations which clear through the Na-

tion's commercial banks. In other words, we have achieved the dream of many years back of getting a national banking system that would give us an "elastic currency," capable of expanding so as to give full opportunity for business to grow as the country grows and as enterprise finds new opportunities. But now we are discovering that the same elasticity which permits wholesome business expansion also permits monetary inflation that at best means going around in a squirrel cage and at worst may spell an economic crash.

If we are to make this "elastic currency" system safe as well as powerful, we must give it two-way elasticity—that is, ability to contract as well as expand. That is the meaning of the credit control controversies of recent months. The Federal Reserve has sought, with both skill and courage to exercise the stabilization functions of a central bank. But Congress is not willing to trust this half-public, half-private agency to exercise this function under the guidance of pooled business experience and scientific analysis. It gives the Board of Governors authority to curtail credit in the midst of inflation only in limited ways and for a specified time. Regulation W on consumer credit and Regulation X on mortgage credit cramped the style of some dealers and some builders. It threatened to spoil the inflationary fun. It even threatened to detach some workers from jobs so that a shift could be made to war work. As a result we see dealers and manufacturers and union leaders and bankers putting pressure on Congress to pare down or take away the power of the Federal Reserve governors to make the nation's banking system a disinflationary bulwark for the economy. What Congress does on this issue between now and June 30 will be a good indicator of the future outlook for stabilization, or runaway inflation.

This brings us to the part of inflation mechanics that is not so well understood by the public as is the Federal deficit part. Inflation does not come merely from the fiscal-

monetary or Treasury-Federal Reserve source. We may—and now do—also have inflation-from-the-market. That is what is holding the price index steady at the 183.4 level even while the Treasury is collecting a 3-billion dollar deflationary surplus.

Market inflation could not occur in a small-scale business world of automatic competition. But we live in a world dominated by administered prices, not merely for industrial goods but also for wages and for farm commodities. The executives of each of these powerful groups, as price policy makers, have theories as to what they need to get or ought to get from their market exchanges. In a sellers' market, with an elastic credit-money system, high parity farm prices can be passed on into food and clothing prices, wage increases can be pushed on into higher industrial costs, and higher costs of both wages and materials can be pushed on into higher industrial prices. Since these goods and services are bought by Uncle Sam in large volume, these higher dollar prices lead to larger deficits, and so the process of market inflation and Treasury inflation reinforce and aggravate each other.

Why don't we stop it? Because it is so much more fun to follow the childish practice of trying to "beat the game" by getting a little more for ourselves or our group than the other fellow gets. It would be so much harder to agree to abate one's own demands for more dollars to offset further rises in prices and to make the basis for getting a like stabilization effort by other parties.

Farm leaders are proposing the abandonment of the effort to control prices by a Federal agency. This would give them freedom to exploit their own economic position, which is basically strong, and their political position, which is perhaps stronger. They think they could win in the inflation game.

Organized labor is deeply convinced that its real wages should increase in the stabilization of a high-production economy. They believe they have the economic or political strength to make this phi-

losophy prevail in the end and they believe that "equality" of sacrifice would mean that they should at least maintain and perhaps advance their real income in the accelerated preparedness period. They seem to feel that inflation may be the price the country would have to pay for getting labor's support to the armament effort.

Management has theoretical, statistical, and accounting counter arguments to labor's thesis as to the pattern of long-run economic stabilization. It is concerned about the ultimate consequences of the present inflationary trend. But with government demand so exigent and the future supply of civilian goods so much below prospective spending power, it is disposed to stand pat with the hand it holds behind the stack of blue chips it has accumulated.

Frankly I do not see much prospect that the game of inflation is going to be broken up at an early hour by players who see as good sporting chances as do these three groups.

## CONDON

(Continued from page 29)

ment has literally become jet-propelled.

Typical of a large cross section of farmers only a few years ago and even today in some degree, was the farmer whose boastful testimony to his thrift and hard work was epitomized in the remark that went like this, "Why man I've worn out two farms in my lifetime, and I'm half way through with this one already!"

What then has brought about this great change in agriculture that crawled along on all fours for actual centuries only to go into high gear in the relatively recent past, and achieve in comparative moments what it had not been able to do in generations? Well, a lot of things contributed—not the least of which was education. Coupled with the education were the inventor, the engineer, the implement man, manufacturer, the horticulturist, the fertiliz-

er producer, the chemist, the agronomist.

Farm mechanization as we know it today, was virtually non-existent 25 years ago, although quite a few farmers, from their war-time profits, had purchased tractors. The horse population at this time was listed at 21,430,000, compared to slightly less than 2,000,000 today. The Farm Bureau had been formed and the county agent was increasing in both numbers and acceptance. But in the main Mr. John Q. Farmer followed pretty much in the path of his daddy. The synthetic boom that started in the mid-twenties, seemed to have little effect on his economy, as farm prices failed to respond to the general upswing. The crash came in the fall of '29 and the farmer, who had never attained the top of the arc, found himself at the bottom of things when the smoke cleared away. The influence of the county agent was still to find its full force. Many farmers subscribed to their state farm paper, and others would send now and then to the Extension Service, the State College, or perhaps the NFA for a bulletin on this or that. During this period, a social as well as an occupational boon to those on the land had come of age.

Weather reports—localized up-to-the-minute weather reports, were immediately available and although the farmer, like everybody else, was in no position to do anything about the weather, he at least could plan his work with some idea of what was going to happen, and he was no longer dependent on his weekly newspaper, the current status of Grandpa's rheumatism, or the Swamp Root almanac that hung by a string on the kitchen door.

He had his livestock receipts, his market report, the hay and grain quotations, and all the other information designed to heighten his interest and increase his knowledge. His horizons were broadened, his knowledge of what was happening in his business extended from his township to his State and Nation. His relative loneliness was disappearing. Like so many things that happen in America and that con-

tribute so much to the American pattern of life, radio came so gradually, and was so taken for granted, that we fail to appreciate the great contribution it has made to the improvement of agriculture over the years it has been with us.

On all fronts things were happening—each in its own field. Whether the automobile brought about the good roads system, or vice versa, is like the question of precedence concerning the hen and the egg. But come they did—millions of cars and trucks shuttled back and forth over endless miles of improved roads—concrete, black top, macadamized and farm to market. A hard day's drive in dad's time was now spanned in a short half hour. Time was saved, markets were made more accessible, the farmer became more independent and increasingly less a victim of the isolation that had hampered his progress.

Concurrently with the advance of the automobile came the improvement in the field of farm machinery of every description. The tractor became more efficient, less expensive and certainly more versatile. Instead of being confined to the field, it became a general utility implement, with suitable attachments, it could saw wood, pull stumps, grind corn, dig potatoes, and a host of other things.

Tumbling along in rapid succession came such things as the hay baler, the combine, the corn and cotton picker to mention a few. Efficiency was stepping up at an unbelievable rate. Skill and know-how were replacing brawn. Unmistakably, the Man with the Hoe was on the way out.

And in the middle of everything came the shocking realization that our most basic natural resource, the very land that sustained us, was not only staining our streams and rivers as it rolled out to the sea in unbelievable quantities, it was rolling over our heads, and blotting the sun and finally settling on the ocean a thousand miles from shore. Came too, and almost belatedly the determination to do something about it. A practical, workable Soil Con-

ervation program, working in all parts of the country has already stemmed the tide and is well on the way of restoration.

This year Rural Electrification celebrated its sixteenth birthday. Sixteen years ago but 10 percent of our farms were electrified. Today that figure stands at ninety percent. The farm home shared in the resurgence and with electric power came that great boon to the farm homemaker and to the health of millions — running water. Inside plumbing, electric washers, milking machines, refrigeration. Certainly the farm was becoming more attractive—as a place to work and as a place to live.

But this shift to the New Agriculture was by no means confined to the mechanical arts. New seeds were developed—hybrid seeds that made the farmer less subject to the vagaries of the weather man—seeds that were drought resistant, rust resistant and wilt resistant. More concentrated and more nutritious feed formulas were made available. Insecticides—insecticides of unbelievable power and efficiency came along. And so on down the line. Truly the farmer is on the march. Better food and fibre production, more efficiency and economical production. Certainly the day of haphazard farming is sinking into the sunset.

Our population has grown and is continuing to grow at an unprecedented rate. The world population despite wars, famines, and the cataclysm of nature is at an all time high of 2,378,000,000. A gain of more than five hundred million in the past twenty-five years. And as these demands increase we are faced with the certain knowledge that the acreage available is generally speaking about all there is. As a matter of fact, the number of acres available to supply the needs of each of our citizens has been reduced by slightly more than one-half in the past fifty years.

So the whole problem—our national well being, our national security — yes, our very existence—depends more than anything else on

our ability to produce from the land. Land—good productive land, is the most important asset in world history. Land—or the lack of it—lies at the bottom of every major war.

Hitler screamed "Lebensraum" as he stumped up and down all over Germany. "More room," he demanded—"Breathing space" — what he means was land.

"An African Empire for the people of Italy" thundered Il Duce as he thumped his chest before his hungry and deluded minions. Call it Empire if you want it—what he meant was more land to produce more food for a Nation unable to sustain itself.

And on the other side of the world the cry from Tojo and the little Emperor was "An Asiatic sphere of co-prosperity." That double talk, translated, simply means of course, more land. "Asia for the Asiatics" was the corollary slogan. Asiatics, my eye. Asia for the Japanese—for the hungry undernourished Japanese was what they meant—and for a time at least it looked as though they would get it.

It's no different today. What does Stalin want? Stripped of all gobbledygook he wants land. He has plenty of land, of course, but most of it is no good. He wants land like the Ukraine. He wants the United States—he wants our land. He is not concerned too much with the Empire State Building or the gold in Fort Knox. Of course, he'll take it if he can get it. As a matter of liberal fact, he'd take the gold in your teeth. As a matter of further fact, he's done exactly that to countless of his prisoners behind the iron curtain.

I hope you don't think that I have overdramatized the situation. I assure you I haven't tried to. It is my sincere conviction and I repeat that in our ability to continue to enlarge and expand our food and fibre production to meet our expanding needs, lies our ability to endure.

## Personals

G. M. Robb has been made manager of the Houston, Texas, multi-wall paper bag plants of Bemis Bro. Bag Company. He succeeds F. V. Deaderick, now Eastern sales director. C. J. Hurstler goes into the post of Houston sales division. L. W. Chenault is assistant to Mr. Robb.

Kirk C. Mattson has joined Pennsalt of Washington as district sales manager of the Los Angeles office. He has had 15 years of marketing industrial and agricultural chemicals in California, and until recently headed his own sales agency.

Frank J. Welch is now Dean of the University of Kentucky College of Agriculture, director of the AES and of the extension service, succeeding Dean Thomas P. Cooper who has relinquished the post after 33 years of service. Dr. Welch has held the same posts at Mississippi State.

H. Alexander Smith, Jr., house counsel of The Davison Chemical Corporation, has been appointed by the board of directors to the additional post of assistant secretary of the corporation.

Myron M. Keim, agronomist for Virginia-Carolina Chemical Corporation, is now located in the home office of the company in Richmond, Va. where he will continue to handle agronomic work for the mid-west area and also for the areas covered by V-C offices at Baltimore, Md.; Carteret, N. J.; Norfolk and Richmond, Va.

M. E. Greiner, Vice President and General Manager of Hammond Bag and Paper Company, who has been elected a Director of the company.



**Frank E. Boyd**, agronomist for the corporation in Montgomery, Ala., will continue to handle agronomic work for the southern area.

The University of Maine, at its commencement exercises held on June 17, conferred upon **J. E. Totman** of **Summers Fertilizer** the honorary degree of Doctor of Laws, in recognition of his outstanding business achievements and his loyal and constant interest in the University.

Mr. Totman graduated from the University of Maine in 1916 at which time he received a B. S. degree in Agronomy. He has been President of the Summers Fertilizer Company since 1922. During this period he managed and developed the company and its subsidiaries from a small organization into one of international activity. He is Chairman of the Board of Directors of the National Fertilizer Association.

**Dr. I. M. LeBaron** has been appointed director of research laboratories for **International Minerals & Chemical Corporation**, according to an announcement by **Dr. Paul D. V. Manning**, vice president of the corporation in charge of research. Dr. LeBaron has been a research engineer with International since 1942.

**Thomas P. Forbath**, director of research and development and a supervising engineer of **Chemical Construction Corporation**, was given an award by the Chemical Engineers of Greater New York at a dinner meeting held June 7. Forbath was cited for his contributions to a new process involving production of sulfuric acid and for the

extraction of sulfur from low-grade ores.

**H. B. Siems**, research director for **Swift & Co.** wrote the chapter on fertilizers in the Encyclopedia of Chemical Technology. And **A. L. Wiley**, of Swift's plant food division in Atlanta recently celebrated his 45th year with the company. He began as a messenger in the Fort Worth meat department.

**Stuart Evans** is in charge of field work for the weed control program of **Arizona Fertilizer, Inc.**, Phoenix, and was formerly plant pathologist for the Arizona Commission of Agriculture and Horticulture.

**O. C. Minton**, manager of their operation in Fort Pierce, Florida, has been made a vice-president of **Naco Fertilizer**. He is vice-chairman of the Florida Citrus Commission.

**Joe Lux** has been made president of **Columbia Gypsum**, Spokane, Washington. **John Tenhold** was re-elected vice-president, and **L. C. Brown** was made secretary-treasurer. (See Around the Map).

**H. G. Wells**, former Vertagreen sales manager, has been moved up by **Armour Fertilizer** to the post of Atlanta Division manager. **Howard Rabb**, who continues as advertising manager, will succeed Mr. Wells.

**Howard Berry**, after 28 years with **Mathieson Chemical**, has resigned to become associated with **R. S. Aries & Associates**, consulting engineers and economists, as senior associate.

**Tom E. Camp, Jr.** whose appointment as sales head for Southwest Potash we reported in June. Southwest is a subsidiary of the American Metal Company. Tom has for many years been among the top brass at **Armour Fertilizer**.



**Herbert Sliger**, now manager of the Commercial Solvents purchasing department, formerly assistant general sales manager. He joined C.S. in 1927.



**Dr. R. K. Voorhees**, well known plant pathologist and horticulturist, who has been appointed horticulturist of **Wilson & Toomer Fertilizer Company**.

**Rabb**



**Wells**





## CALIFORNIA

American Cyanamid's new construction in Los Angeles, with 64,000 feet of floor space for offices and warehouse is expected to be ready to serve the trade by September of this year.

\* \* \*

**International Fertilizer & Feed Company**, Bakersfield, has reorganized its Board. **Frank Jeppi** and **W. B. Camp**, having sold their interests, have been replaced by **Sam H. Rudnick** and **Donna Amenta**. Officers now include **Harry Amenta**, retained as president; **Oscar Rudnick** and **Grant P. Border**, vice presidents; **Herman L. Boyd**, secretary; **Sam J. Amenta** assistant secretary; **Sam H. Rudnick**, treasurer.

## FLORIDA

A million dollar hydroponic farm is projected for Boca Raton, with **Earl Mackay** as general manager. The backers are three retired Boston businessmen: **Milton Herman**, **Sydney Rabinowitz** and **H. "Mickey" Finn**. The outfit expects to be shipping a carload of cucumbers from the farm daily within 12 months, around the calendar. The tract is a 1100-acre former airport, and the operation is said to be the largest of its kind in the world.

## GEORGIA

American Cyanamid is believed, by Savannah people, to be projecting a \$10,000,000 plant there. Attorneys representing the company were feted by officials of the District Authority at Savannah last month, and the concern has an option on 1600 acres near the city.

## IDAHO

**Bunker Hill & Sullivan Mining and Concentrating Company** is said to be considering the construction at Kellogg of a million dollar plant to recover sulphur from zinc and lead ore processing.

\* \* \*

**Monsanto Chemical Company's** phosphate division will build a multi-million dollar elemental phosphorus plant at Soda Springs,

Idaho, which will be the most modern in the chemical industry. **J. L. Christian**, general manager of Monsanto's phosphate division, said the new plant is scheduled to begin operation in the latter part of 1952.

The **J. H. Ferguson Company** of Cleveland, Ohio, will design the plant and the **Morrison-Knudson Company** of Boise, Idaho, will build it. Construction is expected to start this summer. **W. T. Durrett** of Anniston, Ala., chief engineer of Monsanto's phosphate division, will have supervision of design and construction.

The installation will comprise both mining and processing operations for converting phosphate rock into elemental phosphorus. Facilities for the plant will include an office building, laboratories, store-rooms, a machine shop, a pre-furnace processing plant and a furnace plant.

**John E. Gurvin** of Everett, Mass., will be in charge of construction and will be plant manager when construction is completed. Mr. Gurvin was superintendent of construction during the building of Monsanto's phosphorus plant at Monsanto, Tenn., in 1936.

## MICHIGAN

**American Agricultural Chemical Co.** is building a new fertilizer plant at Saginaw, which is expected to be completed by next January. A forty acre site has been purchased.

## OHIO

**Benzol Distributors, Inc.**, have taken a portion of the **Dayton Fertilizer Corp.** site, in Dayton, and will construct new fertilizer buildings and seven storage tanks.

## SOUTH CAROLINA

The Charleston News & Courier recently printed the following report on their city's \$16,000,000 fertilizer industry:

"Sometime shortly after the close of the War Between the States, a number of factors combined to make Charleston a fertilizer manufacturing and distributing center.

"Eleven plants in the Charleston

area give employment to more than 1,200 people and strangely enough, this industry which now feeds so many, was founded, in a way, on the poverty of the defeated South.

"The South has been characterized as defeated, not only militarily, but also through the leaching and bleeding of its soil hungry cotton and corn crops.

"There was a need for fertilizer in the South to replace vital plant foods and industry rose to meet the challenge. And industry found allies in vast phosphate beds and excellent transportation and port facilities made Charleston the center of the new economy.

"Until about 25 years ago, the phosphate mines near Charleston were used extensively but with the advent of better port facilities and rail transportation, it became cheaper to import the ingredient from Florida mines simply because unit for unit, the Florida rock had a higher phosphate content.

"As the plants grew, by products were added and many of the plants now produce a variety of items for human and plant consumption and for chemical industries.

"The plants are owned locally and by national organizations.

"Perhaps the largest locally owned is the **A. F. Pringle and Company Works** which employs an average of 300 workers. However, the plants range downward to those which hire only 30 to 45 workers.

"The **Naco Fertilizer Company**, one of the largest; the **Virginia-Carolina Chemical Company** and others have all made extensive use of the port of Charleston for the import of raw materials and the export of finished products.

"The Naco corporation, which until recently had its headquarters in Richmond, Va., has moved top offices to Charleston.

"The **American Agricultural and Chemical Company**, with a large plant here, has 28 plants east of the Mississippi River and one in Cuba. The **Planters Fertilizer and Phosphate Company**, while locally managed, has many stockholders outside the state.



## Around the Map

"The owners of the Pringle company are local as for the most part are the owners of the **Etiwan Fertilizer Company; Logan-Robinson Company, and the Maybank Fertilizer Company.**

"**The F. S. Royster Fertilizer Company** plant is a part of a chain of 16 with headquarters in Norfolk, Virginia.

"These 11 firms have more than \$6,000,000 invested in the Charleston area.

• • •

**S & E Company** has been granted a charter to deal in fertilizers, at Newberry. Capital stock \$20,000; **V. F. Epting**, president.

### TEXAS

**Phillips Chemical Company** is under way with a sulphur extraction plant near Goldsmith which will take a daily 250,000 pounds from natural gas.

• • •

**Hi-Yield's** plant at Bonham was threatened with shut-down due to odor-troubles, until **H. Dean Smith**, its president, met with a group of business men. The trouble came, he explained, from the "black sulphuric we are forced to use because we cannot obtain the pure sulphuric." The business group polled the town, which decided to give their approval to continued operation, despite the odor.

• • •

**Southern Fertilizer and Chemical Company, Dallas**, has been chartered with capital stock of \$10,000. **A.**

**D. Martin, A. C. West and James L. Fox** are incorporators.

• • •

**Lamar Liquid Fertilizer Company, Greenville**, has been incorporated by **Sykes Burnett, B. R. Stephens and Lola Goad.**

• • •

**Nevill Liquid Fertilizer Company, Greenville**, has been incorporated by **Sykes Burnett, Charles P. Nevill, Jr. and Lola Goad.**

### VIRGINIA

**Naco Fertilizer's** push-button plant at Norfolk is due to be in operation by the time you read this issue.

### WASHINGTON

**Activated Fertilizer Corporation's** plan to establish a \$300,000 fertilizer plant in the Spokane valley was stopped at least temporarily by citizen protests over potential fumes. The county planning board, taking up the matter with laboratories at Washington State College, sagely post-mortemed that the company would have met less resistance had it been named "Superphosphate" instead of "Fertilizer." Officers are **S. E. Salter**, president; **Bert Woolridge**, secretary-treasurer.

• • •

**Columbia Gypsum, Spokane**, recently entertained fifty local industrialists at their new \$400,000 plant. This is housed in a steel building on a 72-acre plot. **Loren Brown**, secretary-treasurer, told them of the daily 100-ton output,

and **John Tenold**, vice-president took them on a tour of the big plant. (See personals).

### AUSTRALIA

**Supplies of Sulphur.** In view of the present acute shortage of sulphur in Australia inquiries have been received as to the possibility of producing sulphur from the waste bases resulting from the treatment of sulphide ores in Western Australia.

A suggestion has been made to the State Government that because of the work involved and the shortage of technical officers to undertake it on behalf of mining companies, the matter should be referred to the Commonwealth Scientific and Industrial Research Organisation for investigation.

**Supply of Super.** Superphosphate manufacturers in Western Australia **Cuming Smith and Mt. Lyell Ltd.** have announced that no increased supplies of superphosphate could be expected by consumers using over 34 tons a year for the next four or five years.

It was not expected that the company's Albany works (in the South West of Western Australia) would be completed before the end of 1953. The main reason for the hold-up was the shortages of steel. When in operation, the works (as already reported some time ago in these columns) would be capable of manufacturing 60,000 tons a year.

The world supply of sulphur for the manufacture of superphosphate was fast disappearing and unless new deposits were found conversion would have to be made to the use of pyrites. The cost of conversion would have to be carried by the consumer. Another price increase in superphosphate was likely in the near future.

### Georgia AES Holds Fertilizer Meetings

Meetings of fertilizer dealers and manufacturers were held last month under the auspices of Georgia AES, as was done last year.

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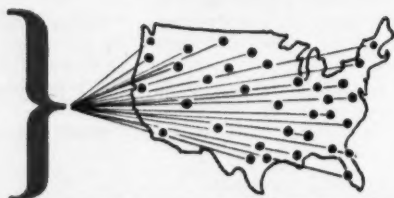
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## Solvay Expands Nitrogen Capacity

Plans to expand synthetic nitrogen capacity by 100,000 tons per year, together with conversion to natural gas from coke as a source of hydrogen, at a total cost of over \$25,000,000, were announced June 24 by The Solvay Process Division, Allied Chemical & Dye Corporation.

The expansion will take place during the next two years at Solvay's Hopewell, Virginia, and South Point, Ohio, nitrogen plants.

The Hopewell plant was built in 1928 and is the largest of its kind in the U. S. The South Point plant was built and operated by Solvay for the Government during World War II and was purchased by the Company in 1946.

Since 1946, the aggregate annual capacity of the Hopewell and South Point plants has been expanded by 80,000 tons of nitrogen to supply the increasing requirements for nitrogen products.

Nitrogen is a basic chemical, only surpassed by sulphuric acid, soda ash, caustic soda and chlorine in tonnage produced. Nitrogen is one of the three primary plant foods and without it the American food pro-

duction record of the past decade would not have been possible.

There is scarcely an important explosive for either peacetime or military use (other than the A-Bomb) that does not have nitrogen as its vital constituent. Most rocket fuels contain nitrogen. Its industrial uses are many and are constantly expanding.

During the past ten years the use of ammonia has about tripled. Today the total U. S. capacity for synthetic ammonia, made by combining nitrogen and hydrogen, is approximately 1,400,000 tons of nitrogen annually, with an additional 400,000 tons contemplated. Mixed fertilizer consumption in the Midwest farm belt alone has increased 500 percent in the last ten years.

This large increase in the consumption has come almost entirely from synthetic sources. Consumption from natural organics, Chilean deposits and coal, has remained fairly constant during the last twenty years.

In 1920, Solvay and The Gen-

eral Chemical Company, now a division of Allied Chemical & Dye Corporation, formed Atmospheric Nitrogen Corporation and built in Syracuse, New York, the first commercially successful synthetic ammonia plant in the United States. It went into run in 1921 and was operated until 1931 as a pilot plant for the development of technical knowledge and operating experience.

Based on experience gained with the Syracuse unit, construction of a much larger plant was completed in Hopewell, Virginia in 1928. By the end of 1930 the capacity of this plant had been increased to almost 200,000 tons of nitrogen annually, the largest output in the world outside Germany. This development secured nitrogen independence for the United States. In late 1928 a 500,000 ton per year sodium nitrate plant was built at Hopewell to convert ammonia and soda ash to synthetic sodium nitrate for use by the chemical industry and fertilizer trade.



Part of the 140 who attended the small grain tour in North Carolina May 22 which was reported in our June issue.

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**Position wanted:** 14 years in public agricultural development and agronomic work. Interested in agronomic work for fertilizer or base materials manufacture. Write Box #2, c/o Commercial Fertilizer, 75 Third St. N.W., Atlanta, Ga.

**WANTED:** Experienced Plant Manager to supervise operation of 100,000-ton per year complete fertilizer plant. Applicant should be between the ages of 35 and 45. Write for additional details, giving personal data and experience. Box No. 10, c/o Commercial Fertilizer, 75 Third St. N. W., Atlanta, Georgia.

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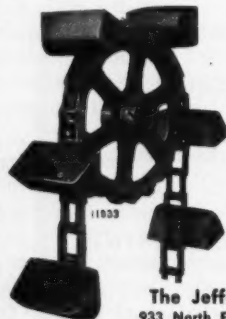
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